# SEARCH REQUEST FORM

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Requester's Full Name: R GITOMER Examiner #: 69630 (STIC) Date: 6/18/03

Art Unit: 1651 Phone Number 308-0732 Serial Number: 09/977,667

Mail Box and Bldg/Room Location: 11301 / 11D11 Results Format Preferred (circle): PAPER DISK E-MAIL

**If more than one search is submitted, please prioritize searches in order of need.**

**********

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

_____

Earliest Priority Filing Date: _____

***For Sequence Searches Only*** *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

JAN

Jan Delaval
Reference Librarian
Biotechnology & Chemical Library
CM1 1E07 – 703-308-4498
jan.delaval@uspto.gov

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Date Completed: 6/30/03

Searcher Prep & Review Time: _____

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NA Sequence (#) _____

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Litigation _____

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PTO-1590 (8-01)

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FILE COVERS 1907 - 30 Jun 2003  VOL 139 ISS 1
FILE LAST UPDATED: 29 Jun 2003  (20030629/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.


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L69  ANSWER 1 OF 34  HCAPLUS  COPYRIGHT 2003 ACS
AN   2003:320162  HCAPLUS
DN   138:299800
TI   A system for detection of urease in a human gastric
     sample for diagnosis of gastrointestinal bacterial
     infection
IN   McMichael, Donald J.; Peterson, Kristy; Marshall,
     Barry J.; Mendis, Aruni H. W.; Chairman, Simon
PA   Kimberly-Clark Worldwide, Inc., USA
SO   PCT Int. Appl., 34 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
IC   ICM  G01N033-48
CC   7-1 (Enzymes)
     Section cross-reference(s): 14
FAN.CNT 1
     PATENT NO.          KIND  DATE          APPLICATION NO.  DATE
     ----------------    ----  --------      ---------------  --------
PI   WO 2003034061       A2    20030424      WO 2002-US29814  20020918
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,
             TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
             CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
             NE, SN, TD, TG
     US 2003077680       A1    20030424      US 2001-977555   20011015
     US 2003077684       A1    20030424      US 2001-977874   20011015
     US 2003082664       A1    20030501      US 2001-977556   20011015
     US 2003082661       A1    20030501      US 2001-977667   20011015
PRAI US 2001-977555      A     20011015
     US 2001-977556      A     20011015
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US 2001-977667 A 20011015
US 2001-977874 A 20011015

AB A system and method for detecting bacterial infections in the human **gastrointestinal** tract is disclosed. In one embodiment, the system includes a first compn. sepd. from a second compn. The first compn. contains **urea** in **powd.** form. The second compn., on the other hand, contains an **indicator.** A **biopsy** of a **gastric sample** is first contacted with the first compn. and then placed in the second compn. The second compn. **indicates** the presence of an enzyme that, in turn, **indicates** the presence of bacteria. In an alternative embodiment of the present invention, a **biopsy** of a **gastric sample** is contacted with a single compn. The compn. contains **urea** in a **powd.** form combined with a dry **indicator.** Besides **urea** and a dry **indicator,** the compn. can also contain an anticaking agent. The system of the present invention can include a container for holding the compns. A specimen handling tool can be included in the container for handling a **biopsy sample.**

ST **urease biopsy** detection **gastrointestinal** bacterial infection diagnosis human; **urea** anticaking agent **indicator urease** detn **gastrointestinal** infection diagnosis

IT Titration
(acid-base, **pH** adjuster; system for detection of **urease** in human **gastric sample** for diagnosis of **gastrointestinal** bacterial infection)

IT Analytical apparatus
(biochem.; system for detection of **urease** in human **gastric sample** for diagnosis of **gastrointestinal** bacterial infection)

IT Stomach
(**biopsy;** system for detection of **urease** in human **gastric sample** for diagnosis of **gastrointestinal** bacterial infection)

IT Digestive tract, disease
(infection; system for detection of **urease** in human **gastric sample** for diagnosis of **gastrointestinal** bacterial infection)

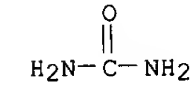
IT Diagnosis
(mol.; system for detection of **urease** in human **gastric sample** for diagnosis of **gastrointestinal** bacterial infection)

IT Particle size
(of **urea powder;** system for detection of **urease** in human **gastric sample** for diagnosis of **gastrointestinal** bacterial infection)

IT **Acid-base indicators**
Agglomeration preventers
Antibacterial agents
**Colorimetric indicators**
Containers
Digestive tract
Digestive tract, disease
Films
**Gels**
Human
**Indicators**
**Powders**
**Sample** preparation
Test kits
(system for detection of **urease** in human **gastric sample** for diagnosis of **gastrointestinal** bacterial

infection)
IT 1344-00-9, Sodium aluminosilicate 7631-86-9, Silica, biological studies
RL: ARU (Analytical role, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(anticaking agent; system for detection of **urease** in human **gastric sample** for diagnosis of **gastrointestinal** bacterial infection)
IT **9002-18-0, Agar**
RL: ARU (Analytical role, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**gel**; system for detection of **urease** in human **gastric sample** for diagnosis of **gastrointestinal** bacterial infection)
IT **57-13-6, Urea**, biological studies
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**powder**; system for detection of **urease** in human **gastric sample** for diagnosis of **gastrointestinal** bacterial infection)
IT **7664-41-7, Ammonia**, biological studies
RL: ANT (Analyte); ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(system for detection of **urease** in human **gastric sample** for diagnosis of **gastrointestinal** bacterial infection)
IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; **DGN (Diagnostic use)**; **ANST (Analytical study)**; BIOL (Biological study); USES (Uses)
(system for detection of **urease** in human **gastric sample** for diagnosis of **gastrointestinal** bacterial infection)
IT **143-74-8, Phenol red**
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(system for detection of **urease** in human **gastric sample** for diagnosis of **gastrointestinal** bacterial infection)
IT **9002-18-0, Agar**
RL: ARU (Analytical role, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**gel**; system for detection of **urease** in human **gastric sample** for diagnosis of **gastrointestinal** bacterial infection)
RN 9002-18-0 HCAPLUS
CN Agar (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **57-13-6, Urea**, biological studies
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**powder**; system for detection of **urease** in human **gastric sample** for diagnosis of **gastrointestinal** bacterial infection)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



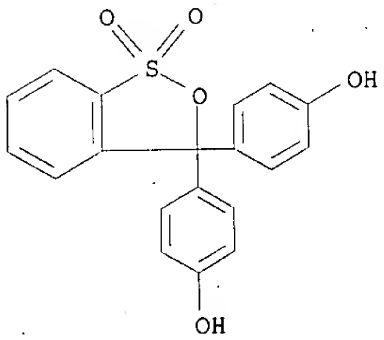
IT **7664-41-7, Ammonia**, biological studies

RL: ANT (Analyte); ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(system for detection of **urease** in human **gastric sample** for diagnosis of **gastrointestinal** bacterial infection)
RN 7664-41-7 HCAPLUS
CN Ammonia (8CI, 9CI) (CA INDEX NAME)

$NH_3$

IT **9002-13-5, Urease**
RL: **ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study)**; BIOL (Biological study); USES (Uses)
(system for detection of **urease** in human **gastric sample** for diagnosis of **gastrointestinal** bacterial infection)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **143-74-8, Phenol red**
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(system for detection of **urease** in human **gastric sample** for diagnosis of **gastrointestinal** bacterial infection)
RN 143-74-8 HCAPLUS
CN Phenol, 4,4'-(1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene)bis- (9CI) (CA INDEX NAME)




L69 ANSWER 2 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN **2003:76201** HCAPLUS
DN **138:300142**
TI Method for determining Helicobacter pylori-associated **intragastral urease** activity from **biopsies**
IN Nizhevich, A. A.; Sataev, V. U.; Khasanov, R. Sh.; Mel'nikova, Z. M.; Loginovskaya, V. V.; Akhmetshin, R. Z.
PA Bashkirskii Gosudarstvennyi Meditsinskii Universitet, Russia
SO Russ., No pp. given
CODEN: RUXXE7
DT Patent
LA Russian
IC ICM G01N033-48
ICS G01N033-49
CC 9-4 (Biochemical Methods)

Section cross-reference(s): 14

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | RU 2189591 | C1 | 20020920 | RU 2001-102196 | 20010124 |
| PRAI | RU 2001-102196 | | 20010124 | | |

AB The inventive method deals with detecting the degree of bacterial seeding vol. of **gastric** mucosa at Helicobacter **gastritis**, **gastroduodenitis** and ulcerous disease. One should take a **biopsy** fragment of **gastric** mucosa and put it into com. soln. Incubation mixt. is subjected for exposure, PEC-**colorimetry** is conducted at 540 nm wave length to compare optic d. with incubation time of **biopsy** fragment and the wt. of **biopsy** fragment (units of optic d./mg **biopsy** material/min). At **urease** activity values ranged 11.5-4 U one should detect a low degree of bacterial seeding vol. of **gastric** mucosa, at its value within 5-10 U a moderate degree is detected and in case its value ranges 11-19 U a high degree of H.pylori seeding vol. is concluded on. The method is of high specificity, enables to conduct a semi-quant. anal. of bacterial seeding vol. of **gastric** mucosa.

ST Helicobacter assocd **intragastral urease** activity **colorimetry biopsy**

IT **Intestine**, disease
(duodenum, ulcer; method for detg. Helicobacter pylori-assocd. **intragastral urease** activity from **biopsies**)

IT Stomach, disease
(**gastritis**; method for detg. Helicobacter pylori-assocd. **intragastral urease** activity from **biopsies**)

IT **Colorimetry**
Helicobacter pylori
(method for detg. Helicobacter pylori-assocd. **intragastral urease** activity from **biopsies**)

IT Stomach
(mucosa; method for detg. Helicobacter pylori-assocd. **intragastral urease** activity from **biopsies**)

IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; **DGN (Diagnostic use)**; **ANST (Analytical study)**; BIOL (Biological study); USES (Uses)
(method for detg. Helicobacter pylori-assocd. **intragastral urease** activity from **biopsies**)

IT **57-13-6, Urea**, biological studies
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(method for detg. Helicobacter pylori-assocd. **intragastral urease** activity from **biopsies**)

IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; **DGN (Diagnostic use)**; **ANST (Analytical study)**; BIOL (Biological study); USES (Uses)
(method for detg. Helicobacter pylori-assocd. **intragastral urease** activity from **biopsies**)

RN 9002-13-5 HCAPLUS

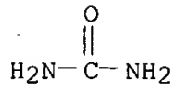
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **57-13-6, Urea**, biological studies
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(method for detg. Helicobacter pylori-assocd. **intragastral urease** activity from **biopsies**)

RN 57-13-6 HCAPLUS

CN Urea (8CI, 9CI) (CA INDEX NAME)



L69 ANSWER 3 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN 2003:24772 HCAPLUS
DN 138:217792
TI Method and test kit of diagnosing helicobacteriosis from estimation of **urease** activity of biological material
IN Dmitrienko, M. A.; Kornienko, E. A.; Mileiko, V. E.
PA Russia
SO Russ., No pp. given
CODEN: RUXXE7
DT Patent
LA Russian
IC ICM C12Q001-04
ICS C12Q001-00
CC 9-1 (Biochemical Methods)
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| RU 2184781 | C2 | 20020710 | RU 1997-117123 | 19970930 |

PRAI RU 1997-117123 19970930

AB The invention relates to investigations involving control of **urease** activity of tissue **samplings** and body fluids in order to est. their bacterial loading, in particular by Helicobacter pylori. **Urease** activity is detd. from the value or time of emergence of **indication** effect of **color** reaction proceeding on solid sorbent as the result of interaction of acid-base **indicator** and products of **urea**-to-**ammonia** hydrolysis caused by endogenous **urease** of microorganisms. **Ammonia** is fixed by solid capillary or grainy sorbent. Method is realized in device allowing performing express anal. of tissue **samplings**, body fluids, and aerosols. **Urea** and acid-base **indicator** are deposited on solid hygroscopic fibrous or grainy microcapillary sorbent in the form of homogeneous fine-crystal dispersion. Tissue **samplings** can also be used for other investigations.

ST Helicobacter helicobacteriosis **urease** detn test kit

IT Bacteria (Eubacteria)
(helio-, infections; method and test kit of diagnosing helicobacteriosis from estn. of **urease** activity of biol. material)

IT Absorbents
**Acid-base indicators**
Body fluid
**Colorimetry**
Helicobacter pylori
**Sampling**
Test kits
(method and test kit of diagnosing helicobacteriosis from estn. of **urease** activity of biol. material)

IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; **DGN (Diagnostic use)**; **ANST (Analytical study)**; BIOL (Biological study); USES (Uses)
(method and test kit of diagnosing helicobacteriosis from estn. of **urease** activity of biol. material)

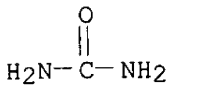
IT **57-13-6, Urea**, biological studies
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(method and test kit of diagnosing helicobacteriosis from estn. of

**urease** activity of biol. material)

IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; **DGN (Diagnostic use)**; **ANST (Analytical study)**; BIOL (Biological study); USES (Uses)
(method and test kit of diagnosing helicobacteriosis from estn. of **urease** activity of biol. material)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **57-13-6, Urea**, biological studies
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(method and test kit of diagnosing helicobacteriosis from estn. of **urease** activity of biol. material)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



L69 ANSWER 4 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:872769 HCAPLUS
DN 137:334615
TI Method and device for **urease** determination in roasted soybean
IN Destri, Maurizio; Maradini, Claudio; Marocchi, Daniela
PA Raggio Di Sole Mangimi S.P.A., Italy
SO Ital., 11 pp.
CODEN: ITXXBY
DT Patent
LA Italian
IC ICM A23K
ICS G01N
CC 7-1 (Enzymes)
Section cross-reference(s): 11, 17
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI IT 1304527 | B1 | 20010319 | IT 1998-PR30 | 19980511 |
| PRAI IT 1998-PR30 | | 19980511 | | |

AB A method and device for **urease** detn. in exts. of roasted soybeans is disclosed. The ext. is combined with a soln. contg. **urea** and the amt. of **ammonia** released is measured with **pH** paper. A tube for the substrate soln. and soy ext. as well as a stopper contg. **pH** paper which is used in the **urease** detn. is also disclosed.
ST soybean soy flour **urease** detn app **ammonia pH** paper
IT Apparatus
(method and device for **urease** detn. in roasted soybean)
IT **Acid-base indicators**
(**pH** paper; method and device for **urease** detn. in roasted soybean)
IT Soybean (Glycine max)
(roasted; method and device for **urease** detn. in roasted soybean)
IT **7664-41-7, Ammonia**, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(detection with **pH** paper of; method and device for

**urease** detn. in roasted soybean)

IT **9002-13-5, Urease**
RL: **ANT (Analyte); ANST (Analytical study)**
(method and device for **urease** detn. in roasted soybean)

IT **57-13-6, Urea**, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(substrate; method and device for **urease** detn. in roasted soybean)

IT **7664-41-7, Ammonia**, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(detection with **pH** paper of; method and device for **urease** detn. in roasted soybean)

RN 7664-41-7 HCAPLUS
CN Ammonia (8CI, 9CI) (CA INDEX NAME)

$NH_3$

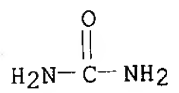
IT **9002-13-5, Urease**
RL: **ANT (Analyte); ANST (Analytical study)**
(method and device for **urease** detn. in roasted soybean)

RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **57-13-6, Urea**, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(substrate; method and device for **urease** detn. in roasted soybean)

RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



L69 ANSWER 5 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN 2002:125559 HCAPLUS
DN 136:130760
TI Detection method of Helicobacter pylori using rapid **urease** detection kit
IN Lee, Jong Wook; Kim, Beom Su; Bae, Su Hwan; Lee, Gyeong Won; Jeong, Yun Seob
PA S. Korea
SO Repub. Korean Kongkae Taeho Kongbo, No pp. given
CODEN: KRXXA7
DT Patent
LA Korean
IC ICM C12Q001-04
CC 7-1 (Enzymes)
Section cross-reference(s): 10, 14

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | KR 2000033013 | A | 20000615 | KR 1998-49668 | 19981119 |
| PRAI | KR 1998-49668 | | 19981119 | | |

AB PURPOSE: Detection kit of Helicobacter pylori using rapid **urease** test is provided which is specific and sensitive to detect **urease** of Helicobacter pylori in the tissue of stomach from human or animals.

CONSTITUTION: **Ammonia** prodn. from the tissue of stomach which is suspended in HCl-KCl **buffer** not being added **urea** is high enough to detect. Addn. of small amt. of **urea** into the **buffer** saves the time of test and increases the sensitivity of the test. A test kit comprises acid **buffer** (**pH** 2.0-5.0) and **indicator**. The acid **buffer** consists of HCl and KCl. Congo red is used as an **indicator** and the **color** change from blue to red is pos. sign. The optimal concn. of **indicator** ranges from 50mg/mL to 2g/mL. The amt. of **urea** added into **buffer** is 50-500mg/mL. The test is performed by only suspension of test tissue in the kit or shaking of the tube.

ST detection Helicobacter pylori **urease** kit

IT Animal
Animal tissue
**Buffers**
**Colorimetry**
Concentration (condition)
Helicobacter pylori
Human
**Indicators**
Mixing
Stomach
Suspensions
Test kits
Time
**pH**
(detection method of Helicobacter pylori using rapid **urease** detection kit)

IT Acids, biological studies
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(detection method of Helicobacter pylori using rapid **urease** detection kit)

IT 14798-03-9, Ammonium, biological studies
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(detection method of Helicobacter pylori using rapid **urease** detection kit)

IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; **DGN (Diagnostic use)**; **ANST (Analytical study)**; BIOL (Biological study); USES (Uses)
(detection method of Helicobacter pylori using rapid **urease** detection kit)

IT **57-13-6, Urea**, biological studies 573-58-0, Congo red
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(detection method of Helicobacter pylori using rapid **urease** detection kit)

IT 7447-40-7, Potassium chloride (KCl), biological studies 7647-01-0, Hydrogen chloride, biological studies
RL: ARU (Analytical role, unclassified); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(detection method of Helicobacter pylori using rapid **urease** detection kit)

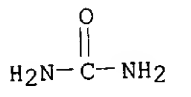
IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; **DGN (Diagnostic use)**; **ANST (Analytical study)**; BIOL (Biological study); USES (Uses)
(detection method of Helicobacter pylori using rapid **urease** detection kit)

RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **57-13-6, Urea**, biological studies
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(detection method of Helicobacter pylori using rapid **urease** detection kit)

RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



L69 ANSWER 6 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:851420 HCAPLUS
DN 135:355035
TI Novel method for the isolation of Helicobacter pylori from highly contaminated specimens
IN Song, Qunsheng; Zirnstein, Gerald W.; Gold, Benjamin D.
PA United States Dept. of Health and Human Services, USA
SO PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12Q001-00
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 10

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2001088183 | A2 | 20011122 | WO 2001-US40756 | 20010516 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | AU 2001059869 | A5 | 20011126 | AU 2001-59869 | 20010516 |
| PRAI | US 2000-205320P | P | 20000518 | | |
| | WO 2001-US40756 | W | 20010516 | | |

AB Methods and kits are disclosed for isolating **urease**-pos. bacteria by exposing a **sample** for 1 to 60 min to a media contg. **urea** along with simultaneous or subsequent exposure to **pH** below 3.0. In one embodiment, the bacteria is H. pylori and the acidic conditions are provided by addn. of HCl. These methods and kits are esp. useful for isolating or detecting H. pylori in **samples**, such as saliva **samples**, contaminated by other microorganisms.

ST isolation Helicobacter pylori contaminated specimen

IT Medical goods
(Endoscopy equipment; novel method for isolation of Helicobacter pylori from highly contaminated specimens)

IT Stomach
(**biopsy**; novel method for isolation of Helicobacter pylori from highly contaminated specimens)

IT Filters
(hydrophobic; novel method for isolation of Helicobacter pylori from

highly contaminated specimens)

IT Bacteria (Eubacteria)
Blood
Cell
Concentration (condition)
Culture media
Environment
Feces
Filters
Filtration
Growth, microbial
Helicobacter pylori
Microorganism
Proteus (bacterium)
Rabbit
Saliva
**Samples**
Test kits
Time
**pH**
(novel method for isolation of Helicobacter pylori from highly contaminated specimens)

IT Acids, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(novel method for isolation of Helicobacter pylori from highly contaminated specimens)

IT Tooth
(plaque; novel method for isolation of Helicobacter pylori from highly contaminated specimens)

IT **7664-41-7, Ammonia**, analysis
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(novel method for isolation of Helicobacter pylori from highly contaminated specimens)

IT **9002-13-5, Urease**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(novel method for isolation of Helicobacter pylori from highly contaminated specimens)

IT **57-13-6, Urea**, biological studies 7647-01-0, Hydrogen chloride, biological studies **9002-18-0, Agar**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(novel method for isolation of Helicobacter pylori from highly contaminated specimens)

IT **7664-41-7, Ammonia**, analysis
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(novel method for isolation of Helicobacter pylori from highly contaminated specimens)

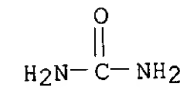
RN 7664-41-7 HCAPLUS
CN Ammonia (8CI, 9CI) (CA INDEX NAME)

$NH_3$

IT **9002-13-5, Urease**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(novel method for isolation of Helicobacter pylori from highly contaminated specimens)

RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **57-13-6, Urea**, biological studies **9002-18-0, Agar**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(novel method for isolation of Helicobacter pylori from highly contaminated specimens)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



RN 9002-18-0 HCAPLUS
CN Agar (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L69 ANSWER 7 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:582293 HCAPLUS
DN 135:133929
TI Detection of H. pylori in the stomach
IN **Marshall, Barry**
PA Australia
SO U.S. Pat. Appl. Publ., 6 pp., Cont.-in-part of U.S. 6,228,605.
CODEN: USXXCO
DT Patent
LA English
IC ICM C12Q001-04
NCL 435034000
CC 7-1 (Enzymes)
Section cross-reference(s): 10, 14

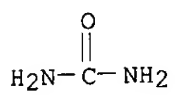
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 2001012623 | A1 | 20010809 | US 2001-824870 | 20010403 |
| PRAI | US 1995-489816 | B1 | 19950613 | | |
| | US 1997-832332 | A2 | 19970326 | | |

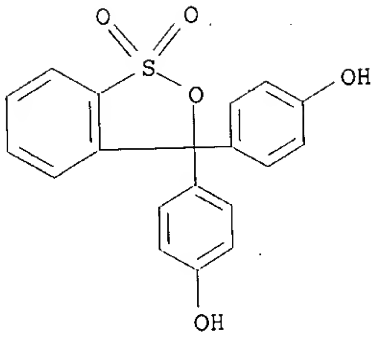
AB A method for the in vivo detection of **urease**-producing Helicobacter in the upper stomach is disclosed. The dense carrier is divided into two sep. groups which are combined with sep. reagent **indicators**, one of which also contains **urea**. The carriers are food sol. products, preferably sugar beads having a diam. of approx. 0.2 to 3.0 mm. The treated carriers and **urea** are encapsulated in a sol. capsule which is administered to a patient. The d. of the carriers cause the capsule to migrate to the **gastric** mucosa, where the capsule, but not the reagents, is dissolved, placing the reagents and **urea** in direct contact with the **gastric** mucosa. The **urea** reacts with any **urease** present in the stomach by creating **ammonia**, which increases the **pH** in the immediate vicinity of the **urea** contg. carrier and **indicator** beads. The two reagents react differently, through **color** change, to the increase in **pH**, which is viewed through use of an endoscope. A preferred first reagent is bromothymol blue (dibromothymolsulfonphthalein), which changes yellow in the presence of **urease**, and a preferred second reagent is **phenol red** (**phenolsulfonphthalein**), which turns red in the presence of **urease**.
ST detection Helicobacter pylori stomach

IT Capsules
(Sol.; detection of H. pylori in stomach)
IT Spheres
(beads; detection of H. pylori in stomach)
IT Carriers
**Colorimetry**
Encapsulation
Endoscopes
Food
**Gastric** juice
Helicobacter pylori
Stomach
Stomach content
**pH**
(detection of H. pylori in stomach)
IT Reagents
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(detection of H. pylori in stomach)
IT Carbohydrates, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(detection of H. pylori in stomach)
IT Stomach
(mucosa; detection of H. pylori in stomach)
IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; THU (Therapeutic use); **ANST (Analytical study)**; BIOL (Biological study); USES (Uses)
(detection of H. pylori in stomach)
IT **57-13-6, Urea**, uses 76-59-5, Bromothymol blue
**143-74-8, Phenol red**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(detection of H. pylori in stomach)
IT 14798-03-9, Ammonium, analysis
RL: ARU (Analytical role, unclassified); FMU (Formation, unclassified); ANST (Analytical study); FORM (Formation, nonpreparative)
(detection of H. pylori in stomach)
IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; THU (Therapeutic use); **ANST (Analytical study)**; BIOL (Biological study); USES (Uses)
(detection of H. pylori in stomach)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **57-13-6, Urea**, uses **143-74-8, Phenol red**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(detection of H. pylori in stomach)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



RN 143-74-8 HCAPLUS
CN Phenol, 4,4'-(1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene)bis- (9CI) (CA INDEX NAME)



L69 ANSWER 8 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN 2001:539704 HCAPLUS
DN 136:18612
TI One hundred years of discovery and rediscovery of Helicobacter pylori and its association with peptic ulcer disease
AU **Marshall, Barry J.**
CS Department of Microbiology QEII Medical Centre, University of Western Australia, Nedlands, 6009, Australia
SO Helicobacter pylori (2001), 19-24. Editor(s): Mobley, Harry L. T.; Mendz, George L.; Hazell, Stuart L. Publisher: ASM Press, Herndon, Va. CODEN: 69BOCI
DT Conference; General Review
LA English
CC 14-0 (Mammalian Pathological Biochemistry)
Section cross-reference(s): 10
AB A review of major highlights during the 100 yr of study of Helicobacter pylori. Topics discussed include spiral bacteria, epidemic **gastritis** with hypochlorhydria, the origin of **gastric urease**, and bismuth salts for **gastric** disease.
ST review Helicobacter pylori peptic ulcer
IT Helicobacter pylori
Stomach
(discovery and rediscovery of Helicobacter pylori and its assocn. with peptic ulcer disease)
IT Ulcer
(peptic; discovery and rediscovery of Helicobacter pylori and its assocn. with peptic ulcer disease)
IT **9002-13-5, Urease**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(discovery and rediscovery of Helicobacter pylori and its assocn. with peptic ulcer disease)
IT 7440-69-9D, Bismuth, salts
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(discovery and rediscovery of Helicobacter pylori and its assocn. with peptic ulcer disease)
RE.CNT 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD
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IT **9002-13-5, Urease**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(discovery and rediscovery of Helicobacter pylori and its assocn. with peptic ulcer disease)

RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L69 ANSWER 9 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN **2000:594938** HCAPLUS
DN **134:82869**
TI A test strip for the estimation of **urea** in serum
AU Kumar, Hemant; Kumar, Ashok; Kumari, Poonam; Tulsani, N. B.
CS Centre for Biochemical Technology, Delhi, 110007, India
SO Indian Journal of Clinical Biochemistry (2000), 15(2), 124-127
CODEN: IJCBEY; ISSN: 0970-1915
PB Association of Clinical Biochemists of India
DT Journal
LA English
CC 9-2 (Biochemical Methods)
AB We have developed a biostrip for detn. of **urea** in serum. The test strip is based on enzymic assay where **urease** has been immobilized on the chromatog. paper along with **chromogen**,

**phenol red**. The **chromogen** is easily sol. in water and does not require other components for the **color** change. Serum **urea** reacts with **urease** and water to liberate **ammonia** and carbon dioxide. The liberated **ammonia** changes the **pH** of the reaction medium, which is monitored by the **chromogen phenol red**. A single step working reagent strip has been developed and the reaction is completed within 50 s at room temp. With this test strip **urea** concn. is measured in serum as low as 0.15 g/L. The speed and convenience of detg. **urea** in serum by this strip instantly makes it well suited for individuals, physicians and emergency centers.

ST **urea** detn serum biostrip enzymic

IT Blood analysis
(**urea** detn. in serum using biostrip)

IT **57-13-6**, **Urea**, analysis
RL: ANT (Analyte); ANST (Analytical study)
(**urea** detn. in serum using biostrip)

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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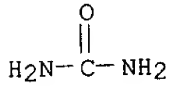
IT **57-13-6**, **Urea**, analysis
RL: ANT (Analyte); ANST (Analytical study)
(**urea** detn. in serum using biostrip)

RN 57-13-6 HCAPLUS

CN Urea (8CI, 9CI) (CA INDEX NAME)



L69 ANSWER 10 OF 34 HCAPLUS COPYRIGHT 2003 ACS

AN 2000:464644 HCAPLUS

DN 133:86488

TI An accurate and inexpensive method for measuring **urea** nitrogen using **urease**

IN Fujii, Takayuki
PA Yatron Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

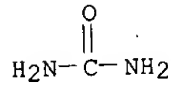
IC ICM C12Q001-58
ICS G01N033-62

CC 9-16 (Biochemical Methods)

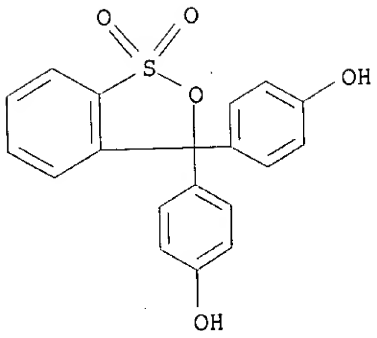
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|

PI JP 2000189196 A2 20000711 JP 1998-376480 19981225
PRAI JP 1998-376480 19981225
AB An accurate method is provided for measuring **urea** nitrogen in a wide range of concn. using an inexpensive reagent. The **urea** nitrogen is quantitated by optically measuring the **pH** change due to **ammonia** generated upon reacting **urease** with **urea** in the presence of a **pH indicator** in the liq. phase contg. at least two kinds of **buffer**. The reagent comprises the first reagent component consisting of at least two kinds of **buffer** contg. at least a **pH indicator**, and the second reagent component consisting of the soln. contg. at least **urease**. The combination of two **buffer** solns. (e.g., HEPES and Tricine, TAPSO and EPPS) gave a linear calibration curve with **urea** in a wide range of concn., comparing with the cases where only one **buffer** soln. was used.
ST **urea** nitrogen **urease pH indicator** **buffer**
IT **Acid-base indicators**
**Buffers**
(accurate and inexpensive method for measuring **urea** nitrogen using **urease**)
IT Calibration
(linear; accurate and inexpensive method for measuring **urea** nitrogen using **urease**)
IT **57-13-6, Urea**, analysis 7727-37-9, Nitrogen, analysis 14798-03-9, Ammonium, analysis
RL: ANT (Analyte); ANST (Analytical study)
(accurate and inexpensive method for measuring **urea** nitrogen using **urease**)
IT **143-74-8, Phenol Red** 2411-89-4, o-Cresolphthaleincomplexone **9002-13-5, Urease**
RL: ARG (Analytical reagent use); **ANST (Analytical study)**; USES (Uses)
(accurate and inexpensive method for measuring **urea** nitrogen using **urease**)
IT 5704-04-1, Tricine 7365-45-9, HEPES 16052-06-5, EPPS 68399-81-5, TAPSO
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(accurate and inexpensive method for measuring **urea** nitrogen using **urease**)
IT **57-13-6, Urea**, analysis
RL: ANT (Analyte); ANST (Analytical study)
(accurate and inexpensive method for measuring **urea** nitrogen using **urease**)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



IT **143-74-8, Phenol Red 9002-13-5, Urease**
RL: ARG (Analytical reagent use); **ANST (Analytical study)**; USES (Uses)
(accurate and inexpensive method for measuring **urea** nitrogen using **urease**)
RN 143-74-8 HCAPLUS
CN Phenol, 4,4'-(1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene)bis- (9CI) (CA INDEX NAME)



RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L69 ANSWER 11 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN **1999:748430** HCAPLUS
DN **131:348779**
TI An immunological method for detecting Helicobacter pylori
IN Nakamura, Michihiro
PA Nihon Koden Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C12Q001-04
ICS G01N033-531; G01N033-569; G01N033-573
CC 9-10 (Biochemical Methods)
Section cross-reference(s): 10, 14

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | JP 11318490 | A2 | 19991124 | JP 1998-136256 | 19980519 |
| PRAI | JP 1998-136256 | | 19980519 | | |

AB A simple immunol. method is described for detecting Helicobacter pylori by specifically detecting the **urease** derived from Helicobacter pylori without using an exclusive and particular app. A **sample** liq. is contacted with the solid phase on which antibodies specific to **urease** derived from Helicobacter pylori is immobilized. Then, the solid phase is washed with a **coloring** liq. contg. at least **urea** and a **pH indicator**. After the washing step, the solid phase is contacted with the **coloring** liq. A change in the **color** of the **coloring** agent is measured or detected with the naked eye. By this method, Helicobacter pylori **urease** was detected at the concn. of more than 0.1mIU/mL.

ST Helicobacter pylori **urease** immunoassay **pH indicator**

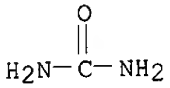
IT **Acid-base indicators**
Helicobacter pylori
Immunoassay
(immunol. method for detecting Helicobacter pylori)

IT Antibodies
RL: ARG (Analytical reagent use); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process); USES (Uses)
(to Helicobacter pylori **urease**; immunol. method for detecting Helicobacter pylori)

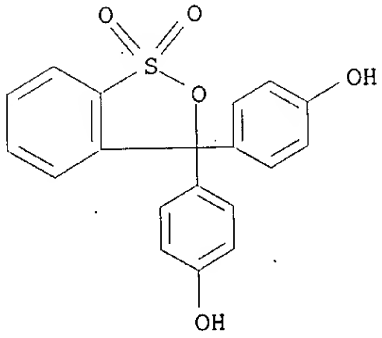
IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; THU (Therapeutic use); **ANST (Analytical**

**study)**; BIOL (Biological study); USES (Uses)
(immunol. method for detecting Helicobacter pylori)
IT **57-13-6, Urea**, analysis **143-74-8, Phenol red**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(immunol. method for detecting Helicobacter pylori)
IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; THU (Therapeutic use); **ANST (Analytical study)**; BIOL (Biological study); USES (Uses)
(immunol. method for detecting Helicobacter pylori)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **57-13-6, Urea**, analysis **143-74-8, Phenol red**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(immunol. method for detecting Helicobacter pylori)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



RN 143-74-8 HCAPLUS
CN Phenol, 4,4'-(1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene)bis- (9CI) (CA INDEX NAME)



L69 ANSWER 12 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN **1999:421809** HCAPLUS
DN **131:41823**
TI **Colorimetric** assessment of the sensitivity of Helicobacter pylori to antimicrobial substances
IN Zuccato, Alessandro
PA Consortia Laboratories, Italy
SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12Q001-18
ICS C12Q001-58; G01N033-62
CC 9-16 (Biochemical Methods)
Section cross-reference(s): 1, 7, 10
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 9932656 | A1 | 19990701 | WO 1998-IT367 | 19981216 |
| | W: AU, BA, BG, BR, CA, CN, CZ, HR, HU, ID, IL, IS, JP, LT, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TR, US | | | | |
| | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | IT 1297510 | B1 | 19991217 | IT 1997-VR122 | 19971223 |
| | AU 9917831 | A1 | 19990712 | AU 1999-17831 | 19981216 |
| PRAI | IT 1997-VR122 | A | 19971223 | | |
| | WO 1998-IT367 | W | 19981216 | | |

AB A **colorimetric** method which is advantageously applicable to a culture medium of the liq. type, and which is further suitable for the evaluation in vitro of sensitivity and resistance of Helicobacter pylori to antimicrobial pharmaceuticals, is based on the **colorimetric** detection of bacterial growth of Helicobacter pylori stemming from an increase in bacterial **urease** concn., said **color** variation being made possible by a **pH color indicator** injected into the culture medium. A **colorimetric** kit for the assessment of Helicobacter pylori's sensitivity and/or resistance to antimicrobial pharmaceuticals, said assessment being carried out with the naked eye and/or by spectrophotometric means, comprises: (a) a plurality of microwells and/or vessels made of transparent material and contg. predetd. antimicrobial substances and at suitably predetd. concns., said vessels being advantageously assembled in printed modules and further being packed in a sterile manner; (b) a culture medium for Helicobacter pylori contg. **urea** and a **color pH indicator**.

ST **colorimetric** Helicobacter pylori antimicrobial substances

IT **Acid-base indicators**
Antimicrobial agents
**Colorimetry**
Culture media
Growth, microbial
Helicobacter pylori
Hybridoma
Immunoassay
Test kits
UV and visible spectroscopy
(**colorimetric** assessment of sensitivity of Helicobacter pylori to antimicrobial substances)

IT Antibodies
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(monoclonal; **colorimetric** assessment of sensitivity of Helicobacter pylori to antimicrobial substances)

IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; THU (Therapeutic use); **ANST (Analytical study)**; BIOL (Biological study); USES (Uses)
(**colorimetric** assessment of sensitivity of Helicobacter pylori to antimicrobial substances)

IT **57-13-6, Urea**, biological studies **143-74-8, Phenol red**
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**colorimetric** assessment of sensitivity of Helicobacter pylori to antimicrobial substances)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

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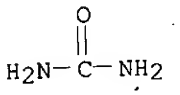
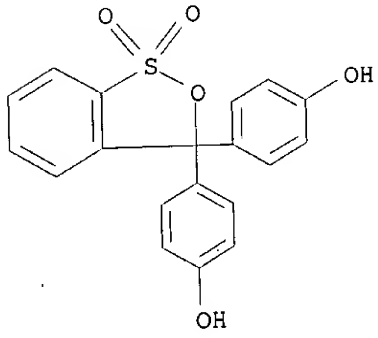
IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; THU (Therapeutic use); **ANST (Analytical study)**; BIOL (Biological study); USES (Uses)
(**colorimetric** assessment of sensitivity of Helicobacter pylori to antimicrobial substances)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **57-13-6, Urea**, biological studies **143-74-8, Phenol red**
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**colorimetric** assessment of sensitivity of Helicobacter pylori to antimicrobial substances)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



RN 143-74-8 HCAPLUS
CN Phenol, 4,4'-(1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene)bis- (9CI) (CA INDEX NAME)




L69 ANSWER 13 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN 1998:754811 HCAPLUS
DN 130:94588
TI A quick, simple and reliable method for detection of **urea** in adulterated milk
AU Kumar, Ashok; Kumar, Hemant; Tulsani, N. B.; Joshi, A. P.
CS Centre for Biochemical Technology, Delhi, 110 007, India
SO Oriental Journal of Chemistry (1998), 14(2), 189-192
CODEN: OJCHEG; ISSN: 0970-020X
PB Oriental Scientific Publishing Co.
DT Journal
LA English
CC 17-1 (Food and Feed Chemistry)
AB Milk is an essential nutrient for human and animals. It is used as milk

as well as in the form of milk products. The main constituents of milk are carbohydrates, proteins, vitamins, minerals and water. Due to the large demand of milk, the milkmaids add water to it to make it more profitable. However, addn. of water results in the decrease of sp. gr. of the milk. For the same reason, an alternate route of adding **urea** , oils and detergents are found which not only maintains the sp. gr. of the milk but are also economical. This practice of adulterating the milk, though harmful for the human beings, is increasing day-by-day, particularly in metropolis. Therefore, a quick and reliable method is required to detect the **urea** in the milk by the customers as well as by the supervising inspectors. A quick, simple, reliable and economical method for the detection of **urea** in the milk was developed. This involves the use of **urease**, which reacts with the milk **urea** to liberate **ammonia**. Subsequently, the liberated **ammonia** reacts with a specific dye and the **color** of the milk is changed to a blue **color**. The development of **color** is quick and is visible with the naked eye. The control will not show any **color** even after adding the dye.

ST **urea** detection milk **color indicator**

IT **Colorimetric indicators**
Milk analysis
(a quick, simple and reliable method for detection of **urea** in adulterated milk)

IT **57-13-6, Urea**, analysis
RL: ANT (Analyte); POL (Pollutant); ANST (Analytical study); OCCU (Occurrence)
(a quick, simple and reliable method for detection of **urea** in adulterated milk)

IT 76-59-5, Bromothymol blue **9002-13-5, Urease**
RL: ARG (Analytical reagent use); **ANST (Analytical study)**; USES (Uses)
(a quick, simple and reliable method for detection of **urea** in adulterated milk)

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD

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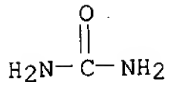
IT **57-13-6, Urea**, analysis
RL: ANT (Analyte); POL (Pollutant); ANST (Analytical study); OCCU (Occurrence)
(a quick, simple and reliable method for detection of **urea** in adulterated milk)

RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



IT **9002-13-5, Urease**
RL: ARG (Analytical reagent use); **ANST (Analytical study)**; USES (Uses)
(a quick, simple and reliable method for detection of **urea** in adulterated milk)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L69 ANSWER 14 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN 1998:711352 HCAPLUS
DN 130:48979
TI Development of a chemiluminescent **urease** activity assay for Helicobacter pylori infection diagnosis in **gastric** mucosa **biopsies**
AU Roda, Aldo; Piazza, Francesco; Pasini, Patrizia; Baraldini, Mario; Zambonin, Laura; Fossi, Stefania; Bazzoli, Franco; Roda, Enrico
CS Department of Pharmaceutical Sciences, University of Bologna, Bologna, Italy
SO Analytical Biochemistry (1998), 264(1), 47-52
CODEN: ANBCA2; ISSN: 0003-2697
PB Academic Press
DT Journal
LA English
CC 7-1 (Enzymes)
Section cross-reference(s): 1, 9, 14
AB A chemiluminescent **urease** activity assay has been developed and optimized using the chemiluminescent **pH indicator** phthalhydrazidylazoacetylacetone. This compd. is stable at **pH** .ltoreq. 7 and decomps. at higher **pH** values, emitting light in the presence of H2O2. **Urease** catalyzes hydrolysis of **urea** to form **NH3** and CO2 which increase the **pH** of the reaction medium, thus allowing the chemiluminescent **indicator** to decomp. and produce photons. The emitted light is proportional to the **urease** activity when **urea** is in excess. **Urease** tests based on **colorimetric pH indicators** like **phenol red** are com. available and commonly used for the rapid diagnosis of Helicobacter pylori infection in **gastric** mucosa **biopsy** specimens, since this bacterium produces high amts. of **urease**. Such **colorimetric** tests often lack sensitivity, giving false-neg. results. The developed chemiluminescent test proved to be at least 50-fold more sensitive than the **colorimetric** tests, permitting early diagnosis of infection, and it is more rapid, giving results in 1-10 min compared to 30 min. Further applications of this assay could be the in situ localization of **urease** activity, corresponding to the presence of H. pylori, in **gastric** mucosa cryosections and the development of high throughput screening assays of antimicrobial drugs able to inactivate the bacterium. (c) 1998 Academic Press.
ST **urease** chemiluminescent assay Helicobacter **gastric** mucosa infection phthalhydrazidylazoacetylacetone
IT Infection
(bacterial; development of a chemiluminescent **urease** activity assay for Helicobacter pylori infection diagnosis in **gastric** mucosa **biopsies**)
IT Bioassay

Diagnosis
Helicobacter pylori
Luminescence, chemiluminescence
(development of a chemiluminescent **urease** activity assay for Helicobacter pylori infection diagnosis in **gastric** mucosa **biopsies**)

IT Stomach
(mucosa; development of a chemiluminescent **urease** activity assay for Helicobacter pylori infection diagnosis in **gastric** mucosa **biopsies**)

IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); **ANST (Analytical study)**; BIOL (Biological study); USES (Uses)
(development of a chemiluminescent **urease** activity assay for Helicobacter pylori infection diagnosis in **gastric** mucosa **biopsies**)

IT 109632-03-3P
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(development of a chemiluminescent **urease** activity assay for Helicobacter pylori infection diagnosis in **gastric** mucosa **biopsies**)

IT 123-54-6, Acetylacetone, reactions 521-31-3, Luminol
RL: RCT (Reactant); RACT (Reactant or reagent)
(development of a chemiluminescent **urease** activity assay for Helicobacter pylori infection diagnosis in **gastric** mucosa **biopsies**)

RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); **ANST (Analytical study)**; BIOL (Biological study); USES (Uses)
(development of a chemiluminescent **urease** activity assay for Helicobacter pylori infection diagnosis in **gastric** mucosa **biopsies**)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L69 ANSWER 15 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN **1996:126652** HCAPLUS
DN **124:170019**
TI Detection of Helicobacter pylori
IN King, Wing
PA USA
SO PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C12Q001-04
ICS C12Q001-02; G01N033-53
CC 9-11 (Biochemical Methods)
Section cross-reference(s): 10, 14
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 9534677 | A1 | 19951221 | WO 1995-US7598 | 19950612 |
| | W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN | | | | |
| | RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| | US 5498528 | A | 19960312 | US 1994-257862 | 19940610 |
| | AU 9528299 | A1 | 19960105 | AU 1995-28299 | 19950612 |
| PRAI | US 1994-257862 | | 19940610 | | |
| | WO 1995-US7598 | | 19950612 | | |

AB A method for detecting H. pylori is disclosed that involves contacting a **sample** suspected of contg. H. pylori with a medium which provides for substantially selective growth of H. pylori, incubating the **sample** with the medium for a time sufficient for detection of H. pylori growth and detecting the growth and thereby reducing the presence of H. pylori within the **sample**. The methodol. employs a wide

range of a different culture media which are modified specifically for the selective growth and specific detection of H. pylori. A typical medium includes Columbia broth supplemented with **urea** and a **pH indicator**. The methodol. provides for a relatively high degree of sensitivity (i.e., small nos. of bacteria present within a **sample** are detected) as well as high selectivity (i.e., the method provides for a low percentage of false positives). Various kits used in connection with the method are designed so that they can be used by unskilled users in an "at home" setting. The kits and methodol. are economical, easily used and provide highly accurate results within a relatively short period of time (e.g., 3 days or less).

ST Helicobacter pylori detection culture media kit; stomach **biopsy** Helicobacter pylori detection; body fluid Helicobacter pylori detection

IT Stomach
(**biopsy**; culture media compns. and methods and kits for Helicobacter pylori detection)

IT Animal tissue
Blood analysis
Blood serum
Campylobacter pyloridis
Culture media
Feces
Microorganism growth
Saliva
Yeast
(culture media compns. and methods and kits for Helicobacter pylori detection)

IT Antibodies
RL: ANT (Analyte); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(culture media compns. and methods and kits for Helicobacter pylori detection)

IT Digestive tract
(secretion; culture media compns. and methods and kits for Helicobacter pylori detection)

IT **Indicators**
(acid-base, culture media compns. and methods and kits for Helicobacter pylori detection)

IT Caseins, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(hydrolyzates, culture media compns. and methods and kits for Helicobacter pylori detection)

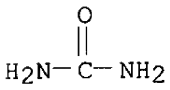
IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; CAT (Catalyst use); **ANST (Analytical study)**; USES (Uses)
(culture media compns. and methods and kits for Helicobacter pylori detection)

IT 50-99-7, Glucose, biological studies 52-89-1, L-Cysteine hydrochloride **57-13-6, Urea**, biological studies 68-04-2, Sodium citrate 77-86-1, Tris **buffer** 738-70-5, Trimethoprim 1404-90-6, Vancomycin 7487-88-9, Magnesium sulfate, biological studies 7647-14-5, Sodium chloride, biological studies 7720-78-7 12633-72-6, Amphotericin 103370-88-3, IsoVitaleX
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(culture media compns. and methods and kits for Helicobacter pylori detection)

IT **9002-18-0, Agar**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(culture media contg.; culture media compns. and methods and kits for Helicobacter pylori detection)

IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; CAT (Catalyst use); **ANST (Analytical study)**; USES (Uses)
(culture media compns. and methods and kits for Helicobacter pylori detection)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **57-13-6, Urea**, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(culture media compns. and methods and kits for Helicobacter pylori detection)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



IT **9002-18-0, Agar**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(culture media contg.; culture media compns. and methods and kits for Helicobacter pylori detection)
RN 9002-18-0 HCAPLUS
CN Agar (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L69 ANSWER 16 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN 1995:665321 HCAPLUS
DN 123:51695
TI Detection of Helicobacter pylori in the stomach using **urea**- and **indicator**-containing reagents
IN **Marshall, Barry**
PA USA
SO PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K009-28
ICS A61K009-48; A91K009-54; C12Q001-04; C12Q001-58; G01N021-77
CC 9-2 (Biochemical Methods)
Section cross-reference(s): 7
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI WO 9511672 | A1 | 19950504 | WO 1994-US12332 | 19941025 |
| W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ | | | | |
| RW: KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| CA 2174933 | AA | 19950504 | CA 1994-2174933 | 19941025 |
| AU 9481270 | A1 | 19950522 | AU 1994-81270 | 19941025 |
| EP 725633 | A1 | 19960814 | EP 1995-900448 | 19941025 |
| R: AT, CH, DE, GB, IE, LI, LU | | | | |

| | | | | | |
|---|---|---|---|---|---|
| | CN 1139381 | A | 19970101 | CN 1994-194624 | 19941025 |
| | JP 09506246 | T2 | 19970624 | JP 1994-512826 | 19941025 |
| | BR 9407718 | A | 19971111 | BR 1994-7718 | 19941025 |
| PRAI | US 1993-142600 | A | 19931028 | | |
| | WO 1994-US12332 | W | 19941025 | | |

AB A method for the in vivo detection of **urease**-producing helicobacter in the upper stomach is disclosed. The dense carrier is divided into two sep. groups which are combined with sep. reagent **indicators**, one of which also contains **urea**. The carriers are food sol. products, preferably sugar beads having a diam. of approx. 0.2 to 3.0 mm. The treated carriers and **urea** are encapsulated in a sol. capsule which is administered to a patient. The d. of the carriers cause the capsule to migrate to the **gastric** mucosa, where the capsule is dissolved, placing the reagents and **urea** in direct contact with the **gastric** mucosa. The **urea** reacts with any **urease** present in the stomach by creating **ammonia**, which increases the **pH** within the stomach. The two reagents react differently, through **color** change, to the increase in **pH**, which is viewed through use of an endoscope. A preferred first reagent is bromothymol blue (dibromothymolsulfonphthalein), which changes yellow in the presence of **urease**, and a preferred second reagent is **phenol red** (**phenolsulfonphthalein**) which turns red in the presence of **urease**.

ST Helicobacter detection stomach **urea indicator**; **urease** Helicobacter detection stomach; bromothymol blue Helicobacter detection stomach; **phenol red** Helicobacter detection stomach

IT Helicobacter
**Indicators**
Stomach
(Helicobacter in vivo detection in stomach with **urea**- and **indicator**-contg. reagents)

IT Carbohydrates and Sugars, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(Helicobacter in vivo detection in stomach with **urea**- and **indicator**-contg. reagents)

IT Food
(sol. food products; Helicobacter in vivo detection in stomach with **urea**- and **indicator**-contg. reagents)

IT Medical goods
Optical instruments
(endoscopes, Helicobacter in vivo detection in stomach with **urea**- and **indicator**-contg. reagents)

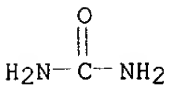
IT **57-13-6, Urea**, uses 76-59-5, Bromothymol blue **143-74-8, Phenol red** 594-05-8, **Urea**-14C 58069-82-2, **Urea**-13C
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(Helicobacter in vivo detection in stomach with **urea**- and **indicator**-contg. reagents)

IT **7664-41-7, Ammonia**, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(Helicobacter in vivo detection in stomach with **urea**- and **indicator**-contg. reagents)

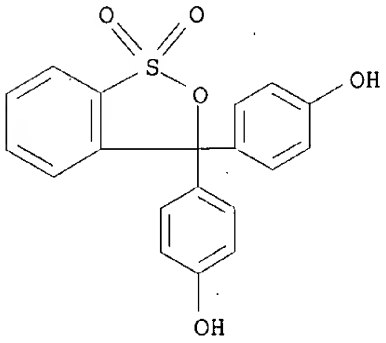
IT **9002-13-5, Urease**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(Helicobacter in vivo detection in stomach with **urea**- and **indicator**-contg. reagents)

IT **57-13-6, Urea**, uses **143-74-8, Phenol red**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)

(Helicobacter in vivo detection in stomach with **urea**- and **indicator**-contg. reagents)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



RN 143-74-8 HCAPLUS
CN Phenol, 4,4'-(1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene)bis- (9CI) (CA INDEX NAME)



IT **7664-41-7, Ammonia**, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(Helicobacter in vivo detection in stomach with **urea**- and **indicator**-contg. reagents)
RN 7664-41-7 HCAPLUS
CN Ammonia (8CI, 9CI) (CA INDEX NAME)

IT **9002-13-5, Urease**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(Helicobacter in vivo detection in stomach with **urea**- and **indicator**-contg. reagents)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L69 ANSWER 17 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN **1994:503066** HCAPLUS
DN **121:103066**
TI Device for carrying out **urease** tests for combined antrum/corpus **biopsies** to diagnose **gastrointestinal** diseases
IN Heckenmueller, Harald; Meyer, Hansjoerg
PA Astra Chemicals GmbH, Germany
SO PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DT Patent
LA German
IC ICM C12Q001-58

ICS B01L003-00; A61B010-00
CC 7-1 (Enzymes)
Section cross-reference(s): 14
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 9413830 | A1 | 19940623 | WO 1993-DE1085 | 19931112 |
| | W: AT, AU, BB, BG, BR, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MG, MN, MW, NL, NO, PL, RO, RU, SD, SE, SK, US | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| | AU 9454175 | A1 | 19940704 | AU 1994-54175 | 19931112 |
| | AU 672657 | B2 | 19961010 | | |
| | EP 673434 | A1 | 19950927 | EP 1993-924519 | 19931112 |
| | EP 673434 | B1 | 19990728 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE | | | | |
| | JP 08506890 | T2 | 19960723 | JP 1993-513636 | 19931112 |
| | AT 182627 | E | 19990815 | AT 1993-924519 | 19931112 |
| | BR 9307593 | A | 19990831 | BR 1993-7593 | 19931112 |
| | ES 2133417 | T3 | 19990916 | ES 1993-924519 | 19931112 |
| | PL 177482 | B1 | 19991130 | PL 1993-309284 | 19931112 |
| | US 5679570 | A | 19971021 | US 1995-446841 | 19950601 |
| | FI 9502767 | A | 19950606 | FI 1995-2767 | 19950606 |
| | NO 9502254 | A | 19950607 | NO 1995-2254 | 19950607 |
| PRAI | DE 1992-9217130 | | 19921208 | | |
| | WO 1993-DE1085 | | 19931112 | | |

AB The title device for diagnosis of **gastrointestinal** diseases assocd. with the **urea**-degrading bacterium Helicobacter pylori (Campylobacter pylori) has a carrier plate, a schematic representation of the stomach on the plate, at least one opening in the plate at the locations corresponding to the corpus and the antrum in the schematic representation of the stomach, an evaluation scale for assessment of the **urease** test and an area for data on the patient and for clin. data. A **gelled** substrate mixt. contg. yeast ext., KH2PO4, **phenol red**, **agar-agar**, dextrose, **urea**, vitamins, and trace elements is described for **urease** detection with the device.

ST stomach **urease** detection **gastrointestinal** disease diagnosis; app **urease** detection stomach **biopsy**

IT Yeast
(ext., in **urease** detection in stomach **biopsies** for disease diagnosis)

IT Campylobacter pyloridis
(**gastrointestinal** diseases assocd. with, diagnosis of, **urease** detection in stomach **biopsies** in)

IT Stomach, composition
(antrum, **urease** detection in **biopsy** of, in **gastrointestinal** disease diagnosis, app. for)

IT Stomach, composition
(corpus, **urease** detection in **biopsy** of, in **gastrointestinal** disease diagnosis, app. for)

IT Digestive tract
(disease, diagnosis of, **urease** detection in stomach **biopsies** in, app. for)

IT **9002-13-5, Urease**
RL: **ANT (Analyte); ANST (Analytical study)**
(detection of, in stomach **biopsies** in **gastrointestinal** disease diagnosis, app. for)

IT **9002-18-0, Agar-agar** 10043-35-3, Boric acid, uses 10361-37-2, Barium chloride, uses 50-99-7, Dextrose, uses **57-13-6, Urea**, uses 58-85-5, D-(+)-Biotin 59-43-8, Vitamin B1, uses 59-67-6, Nicotinic acid, uses 68-19-9, Vitamin B12 139-33-3, Titriplex III **143-74-8, Phenol red**

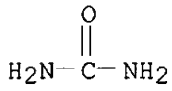
150-13-0, p-Aminobenzoic acid 524-36-7, Pyridoxamine dihydrochloride 867-81-2, Sodium D-pantothenate 1344-13-4, Tin chloride 7447-40-7, Potassium chloride, uses 7447-41-8, Lithium chloride, uses 7631-95-0, Sodium molybdate 7646-79-9, Cobalt chloride, uses 7646-85-7, Zinc chloride, uses 7720-78-7, Iron sulfate 7758-02-3, Potassium bromide, uses 7758-98-7, Copper sulfate, uses 7773-01-5, Manganese chloride 7778-77-0, Potassium phosphate (KH2PO4)
RL: ANST (Analytical study)
(in **urease** detection in stomach **biopsies** for disease diagnosis)

IT **9002-13-5, Urease**
RL: **ANT (Analyte); ANST (Analytical study)**
(detection of, in stomach **biopsies** in **gastrointestinal** disease diagnosis, app. for)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

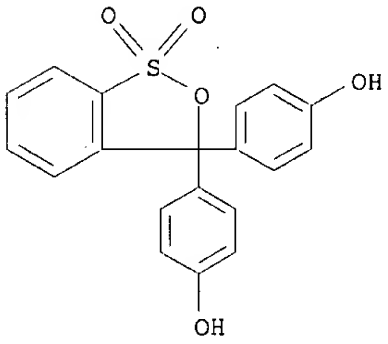
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **9002-18-0, Agar-agar 57-13-6, Urea**, uses **143-74-8, Phenol red**
RL: ANST (Analytical study)
(in **urease** detection in stomach **biopsies** for disease diagnosis)
RN 9002-18-0 HCAPLUS
CN Agar (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



RN 143-74-8 HCAPLUS
CN Phenol, 4,4'-(1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene)bis- (9CI) (CA INDEX NAME)



L69 ANSWER 18 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN **1993:554890** HCAPLUS
DN **119:154890**
TI Reagents for easy determination of **urea**
IN Tabata, Yasushi; Suzuki, Hiroshi; Oomori, Masayuki
PA Terumo Corp, Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C12Q001-58
CC 7-1 (Enzymes)
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI JP 05161500 | A2 | 19930629 | JP 1991-352913 | 19911217 |
| PRAI JP 1991-352913 | | 19911217 | | |

AB **Urea** (I) in body fluids is visually detd. with reagents comprising **urease**, **buffer**, and .gtoreq.2 **pH indicator** having different **color**-changing **pH** region. The method is accurate, and it can det. the concn. of **urea** in the range of 0.0 to 2.5%. Use of Bromthymol blue, **Phenol Red**, Phenolphthalein, and Thymol blue in detn. of I was shown.

ST **urea** easy detn reagent **pH indicator**; **urease** visual detn **urea** body fluid

IT **Buffer** substances and systems
(in reagents for easy visual detn. of **urea** in body fluids)

IT Body fluid
(**urea** easy visual detn. in, reagents contg. **urea** and **buffer** and **pH indicators** for)

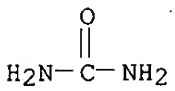
IT **Indicators**
(acid-base, in reagents for easy visual detn. of **urea** in body fluids)

IT **57-13-6**, **Urea**, properties
RL: PRP (Properties)
(easy visual detn. of, in body fluids, reagents contg. **urea** and **buffer** and **pH indicators** for)

IT 76-59-5, Bromthymol blue 76-61-9, Thymol blue 77-09-8, Phenolphthalein **143-74-8**, **Phenol Red** **9002-13-5**, **Urease**
RL: **ANST (Analytical study)**
(in reagents for easy visual detn. of **urea** in body fluids)

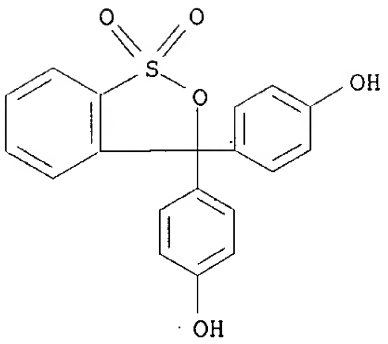
IT **57-13-6**, **Urea**, properties
RL: PRP (Properties)
(easy visual detn. of, in body fluids, reagents contg. **urea** and **buffer** and **pH indicators** for)

RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



IT **143-74-8**, **Phenol Red** **9002-13-5**, **Urease**
RL: **ANST (Analytical study)**
(in reagents for easy visual detn. of **urea** in body fluids)

RN 143-74-8 HCAPLUS
CN Phenol, 4,4'-(1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene)bis- (9CI) (CA INDEX NAME)



RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L69 ANSWER 19 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN 1992:569859 HCAPLUS
DN 117:169859
TI Rapid determination of **urea** in milk
IN Rajamaki, Sinikka; Riihimaki, Anne Maria
PA Valio Meijerien Keskusosuusliike, Finland
SO Brit. UK Pat. Appl., 14 pp.
CODEN: BAXXDU
DT Patent
LA English
IC ICM G01N033-52
ICS C12Q001-58; G01N033-04
CC 17-1 (Food and Feed Chemistry)
Section cross-reference(s): 13, 18
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | GB 2250590 | A1 | 19920610 | GB 1991-25040 | 19911126 |
| | FI 9005949 | A | 19920604 | FI 1990-5949 | 19901203 |
| | FI 88310 | B | 19930115 | | |
| | FI 88310 | C | 19930426 | | |
| | SE 9103370 | A | 19920604 | SE 1991-3370 | 19911114 |
| | SE 512818 | C2 | 20000522 | | |
| | NO 9104711 | A | 19920604 | NO 1991-4711 | 19911129 |
| | DK 9101950 | A | 19920604 | DK 1991-1950 | 19911202 |
| PRAI | FI 1990-5949 | A | 19901203 | | |

AB A method for detn. of **urea** in milk that can be used in the field is described. In the method the reaction zone is sep. from the **indicator** zone and the **indicator** reaction of the detn. must be conducted in a closed vessel. The reaction uses **urease** to degrade **urea** to ammonium salts and these are then broken down to free **NH3** by exposure to an alk. The released **NH3** then changes the **color** of an **indicator** zone that contains a **pH**-dependent dye. The **color** of the incubator strip after a fixed incubation period is used for a semi-quant. detn. of **urea**. Filter paper strips were impregnated with a mixt. **Phenol Red** Na salt and Bromothymol Blue Na salt **buffered** with NaH2PO4 at 0.00025 M or 0.0023 M. These were placed in the two-part cover of a tightly closable 10 mL container with the two papers kept sepd. by a partition. **Urease** (60-250 units) was added to the container and 1 mL milk added. After 2.5 min min. NaOH 0.1 M was added and the cover closed. The **colors** of the test strips after a further 2.5 min showed a relationship to the **urea**

content of the milk as detd. by a spectrophotometric method of the prior art. Milk **samples** could be sorted in to <20, 20-30, or >30 mg **urea**/100 mL categories using this test. The method of the invention correctly classified 86.4% of milk **samples** compared to the spectrophotometric method.

ST milk **urea** detn **urease**

IT Phosphates, uses
RL: USES (Uses)
(as **buffer** in rapid detn. of **urea** in milk using **urease** and alk. and **pH**-dependent test strips)

IT Apparatus
(biochem., test strips, **pH**-dependent, in rapid detn. of **urea** in milk using **urease** and alk.)

IT Milk analysis
(for **urea** detn., rapid assay using **urease** and alk. and **pH**-dependent test strips for)

IT **Indicators**
(**pH**-dependent, in rapid detn. of **urea** in milk using **urease** and alk.)

IT **Buffer** substances and systems
(phosphate, in rapid detn. of **urea** in milk using **urease** and alk. and **pH**-dependent test strips)

IT **34487-61-1, Phenol red**, sodium salt
34722-90-2
RL: ANST (Analytical study)
(as **indicator** dye in rapid detn. of **urea** in milk using **urease** and alk.)

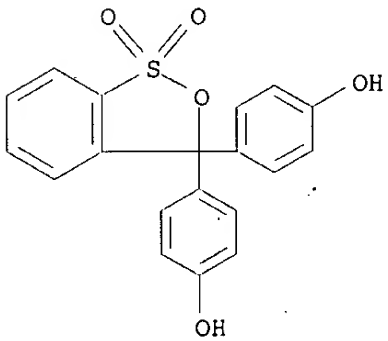
IT **57-13-6, Urea**, biological studies
RL: BIOL (Biological study)
(in milk, rapid detn. of, **urease** and alk. and **pH**-dependent test strips in)

IT **9002-13-5, Urease**
RL: **ANST (Analytical study)**
(**urea** assay for milk using alk. and **pH**-dependent test strips and)

IT **34487-61-1, Phenol red**, sodium salt
RL: ANST (Analytical study)
(as **indicator** dye in rapid detn. of **urea** in milk using **urease** and alk.)

RN 34487-61-1 HCAPLUS

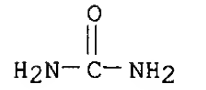
CN Phenol, 4,4'-(1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene)bis-, monosodium salt (9CI) (CA INDEX NAME)




Na

IT **57-13-6, Urea**, biological studies

RL: BIOL (Biological study)
(in milk, rapid detn. of, **urease** and alk. and **pH** -dependent test strips in)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



IT **9002-13-5, Urease**
RL: **ANST (Analytical study)**
(**urea** assay for milk using alk. and **pH**-dependent test strips and)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L69 ANSWER 20 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN **1992:250813** HCAPLUS
DN **116:250813**
TI New plate medium for growth and detection of **urease** activity of Helicobacter pylori
AU Cellini, L.; Allocati, N.; Piccolomini, R.; Di Campli, E.; Dainelli, B.
CS Fac. Med. Chir., Univ. "G. D'Annunzio", Chieti, 66013, Italy
SO Journal of Clinical Microbiology (1992), 30(5), 1351-3
CODEN: JCMIDW; ISSN: 0095-1137
DT Journal
LA English
CC 7-1 (Enzymes)
Section cross-reference(s): 10
AB A new medium for detection of **urease** activity and isolation of H. pylori is proposed. This medium, contg. Columbia **Agar** Base, was supplemented with IsoVitaleX, hemin, **urea**, and **Phenol Red** (nonselective medium [NSM]). Both bacterial growth and **color** change were evaluated and compared with growth in the same medium supplemented with cefsulodin, vancomycin, polymyxin B sulfate, and amphotericin B (selective medium [SM]). Twenty-five recent clin. isolates and antral **biopsy** specimens from 33 patients who underwent endoscopy were examd. The isolates showed a rapid **color** change and good growth at 5 days of incubation with NSM and SM. H. pylori-pos. **biopsies** revealed a **color** change within 36 h, and bacterial growth was better appreciated in NSM, but with more contaminating flora than in SM.
ST culture medium Helicobacter isolation detection; **urease** detection Helicobacter culture medium
IT Campylobacter pyloridis
(detection and isolation of, culture medium for)
IT **9002-13-5, Urease**
RL: **ANT (Analyte); ANST (Analytical study)**
(detection of, in Helicobacter pylori, culture medium for)
IT **9002-13-5, Urease**
RL: **ANT (Analyte); ANST (Analytical study)**
(detection of, in Helicobacter pylori, culture medium for)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

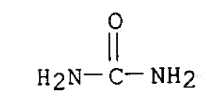
L69 ANSWER 21 OF 34 HCAPLUS COPYRIGHT 2003 ACS

AN **1991:509390** HCAPLUS
DN **115:109390**
TI Diagnostic unit dose for the determination of **urease**
IN Rothgang, Gerhart; Mann, Helmut Josef; Klein, Cornelia J.
PA Roehm Pharma G.m.b.H., Germany
SO Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW
DT Patent
LA German
IC ICM C12Q001-58
CC 7-1 (Enzymes)
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | EP 369292 | A1 | 19900523 | EP 1989-120602 | 19891107 |
| | R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE | | | | |
| PRAI | DE 1988-8814264 | | 19881115 | | |

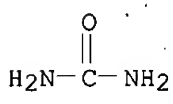
AB A convenient, dry solid unit dose of **urea** for detn. of **urease** contains **urea** (10-320 mg), a **buffer** for the **pH** range 5.0-7.5 (0.01-1 mg), a **pH indicator** which changes **color** over the **pH** range 5.5-8.5 (0.001-0.05 mg), and optionally a preservative (no data). The **buffer** may be KH2PO4-Na2HPO4, and the **indicator** may be e.g. bromcresol purple, neutral red, etc. The components may be compressed to a tablet.
ST **urease** detn **urea** reagent
IT **Buffer** substances and systems
(solid units dose contg., for **urease** detn.)
IT **Indicators**
(acid-base, solid unit dose contg., for **urease** detn.)
IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; **ANST (Analytical study)**
(detn. of, solid unit dose for)
IT **57-13-6, Urea**, biological studies
RL: BIOL (Biological study)
(solid units dose contg., for **urease** detn.)
IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; **ANST (Analytical study)**
(detn. of, solid unit dose for)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **57-13-6, Urea**, biological studies
RL: BIOL (Biological study)
(solid units dose contg., for **urease** detn.)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



L69 ANSWER 22 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN 1991:3292 HCAPLUS
DN 114:3292
TI **Urea** protects Helicobacter (Campylobacter) pylori from the bactericidal effect of acid
AU **Marshall, B. J.**; Barrett, L. J.; Prakash, C.; McCallum, R. W.; Guerrant, R. L.

CS Dep. Med., Univ. Virginia, Charlottesville, VA, 22908, USA
SO Gastroenterology (1990), 99(3), 697-702
CODEN: GASTAB; ISSN: 0016-5085
DT Journal
LA English
CC 10-5 (Microbial Biochemistry)
AB Colonization of the stomach with H. pylori is common in patients with duodenal ulcers, which is known for its high acid secretion. Although the bacterium is usually isolated by culture of a **gastric biopsy** specimen, viable organisms may sometimes be found in the acidic **gastric** juice. It was postulated that **urease**, by generating **NH3**, protected H. pylori from acid. To test this hypothesis, the **pH** susceptibility of H. pylori, Proteus mirabilis, and the **urease**-neg. Campylobacter jejuni was examd. in the presence and absence of **urea**. It was found that without **urea** the 3 bacteria were all highly susceptible to acid. In striking contrast, the addn. of 5 mM **urea** completely protected H. pylori, but not P. mirabilis or C. jejuni, from **pH** values .gtoreq.1.5. The protective effect of **urea** on H. pylori was found with **urea** concns. .gtoreq.0.05 mM. The high **urease** activity of H. pylori apparently enables it to survive in **gastric** acid.
ST acid protection **urea urease** Helicobacter
IT Campylobacter pyloridis
(**gastric** acid effect on, **urea** protection against)
IT **57-13-6, Urea,** biological studies
RL: BIOL (Biological study)
(in protection of Helicobacter pylori against **gastric** acid)
IT **9002-13-5, Urease**
RL: BIOL (Biological study)
(of Helicobacter pylori, protection against **gastric** acid by)
IT **57-13-6, Urea,** biological studies
RL: BIOL (Biological study)
(in protection of Helicobacter pylori against **gastric** acid)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



IT **9002-13-5, Urease**
RL: BIOL (Biological study)
(of Helicobacter pylori, protection against **gastric** acid by)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L69 ANSWER 23 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN 1990:548589 HCAPLUS
DN 113:148589
TI **pH** regulation of **urease** levels in Streptococcus salivarius
AU Sissons, C. H.; Perinpanayagam, H. E. R.; Hancock, E. M.; Cutress, T. W.
CS Dent. Res. Unit, Med. Res. Counc. New Zealand, Wellington, N. Z.
SO Journal of Dental Research (1990), 69(5), 1131-7
CODEN: JDREAF; ISSN: 0022-0345
DT Journal
LA English
CC 10-2 (Microbial Biochemistry)

AB Potential mechanisms for regulation of **urease** levels in S. salivarius were examd., including induction by **urea**, N or C source repression, and effects of **pH** and CO2 (because CO2 enrichment enhanced **urease** detection on **urea agar** plates). Regulation by either **pH** or CO2 was confirmed by comparison of the **urease** accumulation pattern during anaerobic growth under CO2 with that under N2. Under CO2, there was an initial **buffering** plateau at **pH** 6.2 and a rate of S. salivarius **urease** accumulation 3-fold that under N2, with a **pH** 7.6 plateau. With both gas phases there was also an increase in the rate of **urease** appearance coincident with the decrease in medium **pH** following the **pH** plateau. The effects of **pH**, CO2, and HCO3- on **urease** levels and on growth were sep. assessed by culture in media contg. 0, 25, or 100 mM KHCO3 **buffered** at different **pH** levels. There was an inverse relation between the logarithm of the **urease** level after 24 h growth and the **pH** during growth; the **urease** sp. activity was 100-fold higher at **pH** 5.5 than at **pH** .gtoreq.7.0. HCO3-/CO2 (100 mM) had little effect on **urease** levels but was essential for growth at **pH** 5.5. There was no significant **urease** induction by **urea** or repression by **NH3** or glucose. There was also evidence of **pH** regulation of **urease** levels in some staphylococci, Klebsiella pneumoniae, and Corynebacterium renale, but not in Actinomyces naeslundii or several other species. Thus the external **pH** is a major factor regulating **urease** levels in S. salivarius and possibly some other species, a mechanism equiv. to **urease** repression by OH-.

ST Streptococcus **urease** **pH** carbon dioxide

IT Streptococcus salivarius
(**urease** of, **pH** regulation of)

IT **9002-13-5, Urease**
RL: PROC (Process)
(of Streptococcus salivarius, **pH** regulation of)

IT 71-52-3, Bicarbonate, biological studies 124-38-9, Carbon dioxide, biological studies
RL: BIOL (Biological study)
(**urease** of Streptococcus salivarius regulation by)

IT **9002-13-5, Urease**
RL: PROC (Process)
(of Streptococcus salivarius, **pH** regulation of)

RN 9002-13-5 HCAPLUS

CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L69 ANSWER 24 OF 34 HCAPLUS COPYRIGHT 2003 ACS

AN 1990:548382 HCAPLUS

DN 113:148382

TI Compositions and methods for the enrichment and isolation of Campylobacter pylori and related organisms

IN **Marshall, Barry J.**; Guerrant, Richard L.

PA University of Virginia Alumni Patents Foundation, USA

SO U.S., 3 pp.
CODEN: USXXAM

DT Patent

LA English

IC ICM C12Q001-58
ICS C12Q001-04; C12Q001-34; C12Q001-24

NCL 435012000

CC 9-2 (Biochemical Methods)
Section cross-reference(s): 10

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 4923801 | A | 19900508 | US 1987-37938 | 19870413 |
| PRAI | US 1987-37938 | | 19870413 | | |

AB C. pylori is enriched and isolated from a specimen contaminated with other organisms by (a) homogenizing the specimen (e.g. **gastric biopsy**, stool) with water; (b) introducing the specimen into a soln. of **urea** at **pH** .ltoreq.2.5 to kill nonurease-producing and some **urease**-producing organisms and to destroy preformed extracellular **urease**; (c) plating the remaining **urease**-producing organisms onto a medium which contains antibiotics inhibitory to most of the remaining **urease** -producing organisms, but not inhibitory to C. pylori, and (d) detecting colonies of C. pylori. Stool inoculated with C. pylori was homogenized with saline and then mixed with 5 mM **urea** acidified to **pH** 1.6 with H2SO4. After 5 min at room temp., the specimen was plated onto nonselective blood **agar** and cultured for 3 days. After 3 days there were colonies of C. pylori and very few contaminating organisms on the plate.

ST Campylobacter isolation acid **urea**

IT Antibiotics
(in Campylobacter pylori enrichment and isolation with **urea** and acids)

IT Campylobacter pyloridis
(isolation of, **urea** and acids in)

IT Acids, biological studies
RL: BIOL (Biological study)
(Campylobacter pylori enrichment and isolation in presence of **urea** and)

IT Microorganism
(Campylobacter pylori isolation and identification from, **urea** and acid in)

IT Stomach
(Campylobacter pylori isolation from **biopsy** of, **urea** and acids in)

IT Feces
(Campylobacter pylori isolation from, **urea** and acids in)

IT **Indicators**
(acid-base, in Campylobacter pylori enrichment and isolation with **urea** and acids)

IT **7664-41-7, Ammonia**, biological studies
RL: FORM (Formation, nonpreparative)
(formation of, in Campylobacter pylori enrichment and isolation)

IT **9002-13-5, Urease**
RL: FORM (Formation, nonpreparative)
(formation of, Campylobacter pylori enrichment and isolation in relation to)

IT **57-13-6, Urea**, biological studies
RL: BIOL (Biological study)
(Campylobacter pylori enrichment and isolation in presence of acids and)

IT **7664-41-7, Ammonia**, biological studies
RL: FORM (Formation, nonpreparative)
(formation of, in Campylobacter pylori enrichment and isolation)

RN 7664-41-7 HCAPLUS

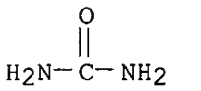
CN Ammonia (8CI, 9CI) (CA INDEX NAME)

$NH_3$

IT **9002-13-5, Urease**
RL: FORM (Formation, nonpreparative)

(formation of, Campylobacter pylori enrichment and isolation in relation to)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **57-13-6, Urea,** biological studies
RL: BIOL (Biological study)
(Campylobacter pylori enrichment and isolation in presence of acids and)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



L69 ANSWER 25 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN 1987:433197 HCAPLUS
DN 107:33197
TI Bismuth composition for treatment of infectious **gastrointestinal** disorders
IN **Marshall, Barry James**
PA Australia
SO Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM A61K031-60
ICS A61K033-00
CC 1-9 (Pharmacology)
Section cross-reference(s): 10
FAN.CNT 2

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | EP 206627 | A2 | 19861230 | EP 1986-304409 | 19860610 |
| | EP 206627 | A3 | 19890405 | | |
| | EP 206627 | B1 | 19920812 | | |
| | R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE | | | | |
| | AT 79261 | E | 19920815 | AT 1986-304409 | 19860610 |
| | DE 3619733 | A1 | 19870212 | DE 1986-3619733 | 19860612 |
| | DE 3619734 | A1 | 19870212 | DE 1986-3619734 | 19860612 |
| | BE 904922 | A1 | 19861215 | BE 1986-216783 | 19860613 |
| | JP 62048624 | A2 | 19870303 | JP 1986-138038 | 19860613 |
| | JP 07094391 | B4 | 19951011 | | |
| | US 5601848 | A | 19970211 | US 1987-70857 | 19870708 |
| PRAI | US 1985-744842 | A | 19850613 | | |
| | EP 1986-304409 | A | 19860610 | | |

AB Treatment of title disorders in humans or lower animals comprises (1) testing for the presence of pyloric campylobacter or similar organism in the stomach; (2) on obtaining a pos. result, administering 50-5000 mg of Bi per day for 3-56 days, or until a neg. result is obtained on a diagnostic test. A preferred test for such infection is through detection of **urease** enzyme in the stomach. A human subject, suffering from peptic ulcer disease, was treated with 700 mg Bi (as Bi subsalicylate) per day for 35 days. The treatment resulted in healing of the peptic-ulcer crater.
ST infectious **gastrointestinal** disorder treatment bismuth
IT Campylobacter
Campylobacter pyloridis

(**gastrointestinal** infection by, bismuth treatment of)
IT Stomach, disease or disorder
(atrophic **gastritis**, campylobacter detection in and bismuth treatment of)
IT Digestive tract
(disease, infectious, bismuth treatment of)
IT Stomach, disease or disorder
(mucosa, campylobacter detection in, bismuth treatment of)
IT Ulcer
(peptic, infectious, bismuth treatment of)
IT **9002-13-5, Urease**
RL: **ANT (Analyte); ANST (Analytical study)**
(detection of, in infectious **gastrointestinal** disorder, bismuth treatment in relation to)
IT 813-93-4, Bismuth citrate 1304-85-4 6591-56-6, Bismuth tartrate 7440-69-9, biological studies 14882-18-9, Bismuth subsalicylate 71156-53-1
RL: BIOL (Biological study)
(infectious **gastrointestinal** disorder treatment with)
IT **9002-13-5, Urease**
RL: **ANT (Analyte); ANST (Analytical study)**
(detection of, in infectious **gastrointestinal** disorder, bismuth treatment in relation to)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L69 ANSWER 26 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN 1987:115736 HCAPLUS
DN 106:115736
TI Compositions, methods, and device for the detection of **urease** for the diagnosis of a Campylobacter pyloridis infection
IN **Marshall, Barry James**
PA Australia
SO Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C12Q001-58
ICA G01N033-52; C12Q001-04
CC 7-1 (Enzymes)
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | EP 204438 | A2 | 19861210 | EP 1986-303493 | 19860508 |
| | EP 204438 | A3 | 19870527 | | |
| | EP 204438 | B1 | 19910306 | | |
| | R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE | | | | |
| | AU 8657398 | A1 | 19861120 | AU 1986-57398 | 19850517 |
| | AU 601363 | B2 | 19900913 | | |
| | US 4748113 | A | 19880531 | US 1985-744840 | 19850613 |
| | CA 1274757 | A1 | 19901002 | CA 1986-508415 | 19860505 |
| | AT 61414 | E | 19910315 | AT 1986-303493 | 19860508 |
| | ZA 8603605 | A | 19880127 | ZA 1986-3605 | 19860515 |
| | DK 8602283 | A | 19861118 | DK 1986-2283 | 19860516 |
| | DK 173710 | B1 | 20010709 | | |
| | NO 8601966 | A | 19861118 | NO 1986-1966 | 19860516 |
| | NO 170091 | B | 19920601 | | |
| | NO 170091 | C | 19920909 | | |
| | BR 8602243 | A | 19870113 | BR 1986-2243 | 19860516 |
| | JP 62026000 | A2 | 19870203 | JP 1986-112427 | 19860516 |
| | JP 06095960 | B4 | 19941130 | | |

PRAI AU 1985-611 A 19850517
US 1985-744840 A 19850613
EP 1986-303493 A 19860508

AB A reagent compn. for the detection of preformed **urease** for diagnosis of **gastrointestinal** disorders caused by C. pyloridis infection in a human or lower animal contains (1) **urea**, (2) a bactericide, (3) a **pH indicator** for detecting an increase in **pH**, and (4) water, where the compn. has a **pH** of .gtoreq.5.0, which is .gtoreq.1 unit lower than the pKa of the **indicator**. A reagent compn. contained **urea** 20, NaN3 1, **agar** 20 g/L, and **phenol red** 60 mg/L; the **pH** was adjusted to 5.50. Injection of a **sample** of vomitus from a human infant suspected of having **gastritis** into the **gelled** reagent compn. resulted in a change in the **color** of the **pH indicator** within 20 min.

ST reagent Campylobacter infection diagnosis; **urease** detection Campylobacter infection diagnosis; **gastrointestinal** disorder Campylobacter **urease** detection

IT Bactericides, Disinfectants, and Antiseptics
(in Campylobacter **urease** detection for **gastrointestinal** disorder diagnosis)

IT Campylobacter pyloridis
(**urease** of, detection of, in **gastrointestinal** disorder diagnosis, reagents for)

IT **Indicators**
(acid-base, in Campylobacter **urease** detection for **gastrointestinal** disorder diagnosis)

IT Digestive tract
(disease, diagnosis of, by Campylobacter **urease** detection, reagents for)

IT 26628-22-8, Sodium azide 29468-36-8
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(as bactericide, in reagent for Campylobacter **urease** detection for **gastrointestinal** disorder diagnosis)

IT **143-74-8, Phenol red**
RL: BIOL (Biological study)
(as **pH indicator**, in Campylobacter **urease** detection for **gastrointestinal** disorder diagnosis)

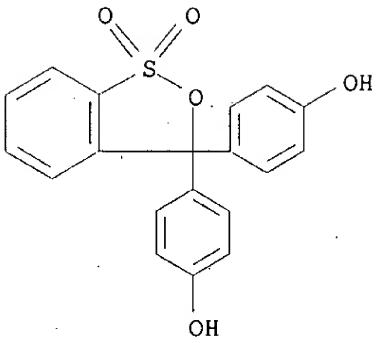
IT **9002-13-5, Urease**
RL: **ANT (Analyte); ANST (Analytical study)**
(detection of, of Campylobacter in **gastrointestinal** disorder diagnosis, reagents for)

IT **57-13-6, Urea**, uses and miscellaneous
RL: USES (Uses)
(in Campylobacter **urease** detection for **gastrointestinal** disorder diagnosis)

IT **143-74-8, Phenol red**
RL: BIOL (Biological study)
(as **pH indicator**, in Campylobacter **urease** detection for **gastrointestinal** disorder diagnosis)

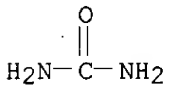
RN 143-74-8 HCAPLUS

CN Phenol, 4,4'-(1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene)bis- (9CI) (CA INDEX NAME)



IT **9002-13-5, Urease**
RL: **ANT (Analyte)**; **ANST (Analytical study)**
(detection of, of Campylobacter in **gastrointestinal** disorder diagnosis, reagents for)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **57-13-6, Urea**, uses and miscellaneous
RL: USES (Uses)
(in Campylobacter **urease** detection for **gastrointestinal** disorder diagnosis)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



L69 ANSWER 27 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN **1982:139455** HCAPLUS
DN **96:139455**
TI Dry nutritive media for the identification of Corynebacterium diphtheriae
AU Kovaleva, V. I.; Dzhalilova, R. S.; Shtanchaeva, S. M.
CS Dagestan. Inst. Proizvod. Pitatel. Sred., Makhachkala, USSR
SO Razrab. Stand. Bakteriol. Pitatel'nykh Sred (1980), 69-71. Editor(s): Semenov, B. F.; Raskin, B. M. Publisher: Mosk. Nauchno-Issled. Inst. Vaktsin Syvorotok im. I. I. Mechnikova, Moscow, USSR.
CODEN: 47IXA8
DT Conference
LA Russian
CC 10-2 (Microbial Biochemistry)
AB Dehydrated nutrient media were prepd. for cultivation and identification of C. diphtheriae, C. pseudodiphtheriticum, and saprophytic diphtheroids. Optimum medium for cultivation was composed of enzymic casein hydrolyzate 3, glucose 0.2, sucrose 1.0, NaCl 0.5, and acid fuchsin 0.009%, **pH** 7.6. Another culture medium, developed to test for **urease** prodn. in Corynebacterium species, was composed of casein hydrolyzate 3.0, glucose 1.0, NaCl 0.5, **phenol red** 0.0052, and **urea** 1.0%, **pH** 7.1. These media were effective for isolation, growth, and differentiation of Corynebacterium species.
ST Corynebacterium cultivation identification culture medium; **urease** detn Cornebacterium culture medium
IT Caseins, compounds
RL: BIOL (Biological study)

DN **87:180311**
TI Reagent mixture for determination of **urea**
IN Chang, Michael
PA USA
SO Ger. Offen., 20 pp.
CODEN: GWXXBX
DT Patent
LA German
IC G01N033-16
CC 9-6 (Biochemical Methods)
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI DE 2600146 | A1 | 19770714 | DE 1976-2600146 | 19760105 |
| PRAI DE 1976-2600146 | | 19760105 | | |

AB A reagent mixt. for the enzymic detn. of **urea** in biol. fluids is described that contains **urease**, an **indicator** dye, possibly a stabilizer, and a **buffer** whose **pH** rises with an increase in temp., and another **buffer** whose **pH** decreases with an increase in temp. Examples of the former type of **buffer** are the pyrophosphate derivs. and of the latter, substituted amines or phenols. Thus, a soln. contg. 10 mM triethanolamine, 10 mM pyrophosphate, 10 mM EDTA, 200 mM NaCl, and 0.3 mM **phenolsulfonephthalein** and distilled H2O was adjusted to **pH** 6-8. **Urease** was dissolved in some of the **buffer**-dye mixt. at an activity of .apprx.100 I.U./ml at 25.degree.. The change in absorbance at 560 nm was detd. for cuvets contg. 2.8 mL of the enzyme-**buffer** and 0.1 mL of std. contg. 10, 50, or 100 mg **urea**-N/100 mL or 0.1 mL of serum or urine, and 0.1 mL of the **urease** soln. The reaction was allowed to go to completion, .gtoreq.5 h. The std. curve was linear up to 200 mg% **urea**-N.

ST serum urine **urea** detn; enzymic detn **urea**

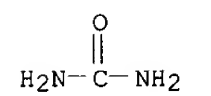
IT **Buffer** substances and systems
(temp.-sensitive, for **urea** spectrometric detn.)

IT **57-13-6**, analysis
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, enzymic, temp. sensitive **buffer** reagent for)

IT **143-74-8 9002-13-5**
RL: **ANST (Analytical study)**
(in **urea** detn.)

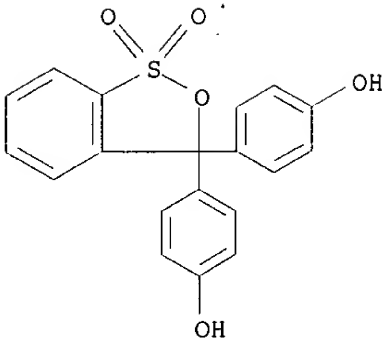
IT **57-13-6**, analysis
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, enzymic, temp. sensitive **buffer** reagent for)

RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



IT **143-74-8 9002-13-5**
RL: **ANST (Analytical study)**
(in **urea** detn.)

RN 143-74-8 HCAPLUS
CN Phenol, 4,4'-(1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene)bis- (9CI) (CA INDEX NAME)



RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

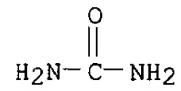
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L69 ANSWER 30 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN 1975:510869 HCAPLUS
DN 83:110869
TI Apparatus and method for analysis of **urea**
IN Gray, Don Norman; Keyes, Melvin H.; Semersky, Frank E.
PA Owens-Illinois, Inc., USA
SO Ger. Offen., 41 pp.
CODEN: GWXXBX
DT Patent
LA German
IC G01N
CC 9-6 (Biochemical Methods)
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | DE 2455970 | A1 | 19750703 | DE 1974-2455970 | 19741127 |
| | DE 2455970 | B2 | 19770721 | | |
| | US 3926734 | A | 19751216 | US 1973-427322 | 19731221 |
| | FR 2255602 | A1 | 19750718 | FR 1974-38065 | 19741120 |
| | FR 2255602 | B1 | 19780616 | | |
| | NL 7415252 | A | 19750624 | NL 1974-15252 | 19741122 |
| | NL 176308 | B | 19841016 | | |
| | NL 176308 | C | 19850318 | | |
| | CA 1039163 | A1 | 19780926 | CA 1974-214867 | 19741128 |
| | GB 1494490 | A | 19771207 | GB 1974-54031 | 19741213 |
| | JP 50098396 | A2 | 19750805 | JP 1974-144361 | 19741216 |
| | AU 7476761 | A1 | 19760624 | AU 1974-76761 | 19741223 |
| PRAI | US 1973-427322 | | 19731221 | | |

AB **Urea** in aq. soln. may be detd. by hydrolyzing it to **NH4**
+ by immobilized **urease**, treating the **NH4**+ with
alkali, and passing the evolved **NH3** through a hydrophobic
membrane where it is measured by a **pH**-sensitive electrode.
Thus, **urease** was immobilized on **agar** with CNBr. A
blood **sample** contg. **urea** was injected into a stream of
**buffer** that carried it into a chamber contg. the immobilized
enzyme. From there the **sample**, now contg. **NH4**+ was
passed into another chamber where it was mixed with NaOH soln. and brought
into contact with a polypropylene film. The **NH3** passing through
was measured by a Ag-AgCl electrode.
ST **urea** detn blood urine; enzymic detn **urea**; electrode
detn **urea**
IT Blood analysis
Urine analysis

(**urea** detn. in, enzymic app. for)
IT **57-13-6**, analysis
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, in biol. fluids, enzymic app. for)
IT **9002-13-5**
RL: **ANST (Analytical study)**
(immobilized, for **urea** detn. in biol. fluids)
IT **57-13-6**, analysis
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, in biol. fluids, enzymic app. for)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



IT **9002-13-5**
RL: **ANST (Analytical study)**
(immobilized, for **urea** detn. in biol. fluids)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L69 ANSWER 31 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN 1973:94524 HCAPLUS
DN 78:94524
TI Differential methods for identification of T-mycoplasmas based on demonstration of **urease**
AU Shepard, Maurice C.
CS Bacteriol. Div., Nav. Med. Field Res. Lab., Camp Lejeune, NC, USA
SO Journal of Infectious Diseases (1973), 127(Suppl.), S22-S25
CODEN: JIDIAQ; ISSN: 0022-1899
DT Journal
LA English
CC 9-4 (Biochemical Methods)
Section cross-reference(s): 10
AB The **indicator** reagent is 0.8% MnCl2 contg. 1% **urea**. The test is carried out at room temp. A pos. reaction for **urease**, i.e. the presence of **NH3** in T-mycoplasma colonies, is extremely rapid (within 5-10 sec), and the test must be performed on colonies <48 hr old. MnCl2 is oxidized to insol., nearly colloidal MnO2, which ppts. on the surface of the colony, producing a dark, golden-brown colony when viewed by transmitted light under low-power microscopy. If a concn. of MnCl2 >0.8% is used, the sensitivity of the reaction is markedly increased, and broad zones of reaction extending outward from the T-mycoplasma colony will be obsd. A differential **agar** medium was developed, contg. 0.03% MnSO4.
ST **urease** mycoplasma detn
IT Mycoplasma
(T-strain, identification of, **urease** in)
IT **9002-13-5**
RL: **ANST (Analytical study)**
(in mycoplasma T-strain detection)
IT **9002-13-5**
RL: **ANST (Analytical study)**
(in mycoplasma T-strain detection)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

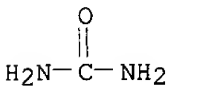
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L69 ANSWER 32 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN 1965:45180 HCAPLUS
DN 62:45180
OREF 62:8051c-d
TI **Urease** by diffusion assay
AU Blain, J. A.; Caskie, M.
CS Univ. Strathclyde, Glasgow, UK
SO Chemistry & Industry (London, United Kingdom) (1965), (1), 17-18
CODEN: CHINAG; ISSN: 0009-3068
DT Journal
LA English
CC 57 (Enzymes)
AB The assay is based on the liberation of **NH3** from **urea** in **agar gel** contg. **indicator**, the diam. of the **colored** zone which results being related to the concn. of the enzyme. The assay is as follows: to 150 ml. of water is added 2.25 g. **agar** and after boiling and cooling to 60.degree., 6 g. **urea**, 12 ml. of 0.04% cresol red in EtOH, and 1 ml. of 0.7% Na diethyldithiocarbamate are stirred in. The **agar** is poured into 140-mm. petri dishes to a depth of approx. 10 mm. and allowed to cool for 30 min. Vertical cups are cut with a 6-mm. cork borer, 12 in each plate, filled with enzyme soln. and covered at once with a 24 mm. cover slip. Diams. of the **colored** zones are measured in 90 min.
IT Blood
(analysis, detn. of aspartic aminotransferase)
IT **9002-13-5, Urease**
(detn. of)
IT **9002-13-5, Urease**
(detn. of)
RN 9002-13-5 HCAPLUS
CN Urease (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L69 ANSWER 33 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN 1947:2439 HCAPLUS
DN 41:2439
OREF 41:499a-b
TI **Urea** decomposition as a means of differentiating Proteus and paracolon cultures from each other and from Salmonella and Shigella types
AU Christensen, W. Blake
CS 1631 Mardall Blvd., San Antonio, TX
SO Journal of Bacteriology (1946), 52, 461-6
CODEN: JOBAAY; ISSN: 0021-9193
DT Journal
LA Unavailable
CC 11C (Biological Chemistry: Microbiology)
AB The following medium is recommended for detg., **urease** activity in organisms which cannot use **NH3** as the sole source of N: bacto-peptone 1, NaCl 5, KH2PO4 2, **phenol red** 0.012, **agar** 20, glucose 1, **urea** 2.0 g., and distd. water 100 cc. The **urea** is sterilized separately as a 20% soln. and added aseptically to the other constituents. The small quantity of peptone and the presence of glucose serve to counteract any alky. produced by peptone decompn. This medium shows Proteus, paracolon Aerobacter, and paracolon intermediates to be **urease** pos., while paracolon Escherichia, Salmonella, and Shigella are neg.
IT Proteus
(differentiation from paracolon bacteria, Salmonella and Shigella)
IT Shigella
(differentiation from Proteus and paracolon bacteria)

IT Bacteria
(paracolon, differentiation from Proteus, Salmonella and Shigella)
IT Aerobacter
Escherichia coli
(**urea** decompn. by)
IT Salmonella
(**urea** decompn. by, in differentiation from Proteus and paracolon bacteria)
IT **57-13-6, Urea**
(decompn. of, in bacteria differentiation)
IT **57-13-6, Urea**
(decompn. of, in bacteria differentiation)
RN 57-13-6 HCAPLUS
CN Urea (8CI, 9CI) (CA INDEX NAME)



L69 ANSWER 34 OF 34 HCAPLUS COPYRIGHT 2003 ACS
AN **1944:39252** HCAPLUS
DN **38:39252**
OREF 38:5861h-i,5862a
TI Manometric, titrimetric and **colorimetric** methods for measurement of **urease** activity
AU Van Slyke, Donald D.; Archibald, Reginald M.
SO Journal of Biological Chemistry (1944), 154, 623-42
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA Unavailable
CC 11B (Biological Chemistry: Methods and Apparatus)
AB The original Van Slyke and Cullen (C. A. 10, 2356) manometric and titrimetric procedures for measuring **urease** activity have been modified for application to the more active **urease** prepns. now available. In order to stabilize jack bean **urease** at high dilns. and to counteract the inactivation by Hg (present in manometric app.), the **urease** has been dissolved in egg albumin (5%), the Van Slyke-Neill chamber rinsed with albumin soln. before each analysis and a concn. of 1% albumin maintained in the reacting **urea-urease** mixt. Three procedures have been described, gasometric (I) titrimetric (II) and **colorimetric** (III) resp. In I, the enzyme activity is measured by the rate of CO2 formation, in II, by the rate of **NH3** formation and in III, by the time required for enough (**NH4**)2CO3 to form to raise the **pH** of a phosphate **buffer** from 6.8 to 7.7 (**phenol red indicator**).

=> sel hit rn
E31 THROUGH E36 ASSIGNED

=> fil reg
FILE 'REGISTRY' ENTERED AT 09:54:32 ON 30 JUN 2003
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STRUCTURE FILE UPDATES: 27 JUN 2003 HIGHEST RN 539020-41-2
DICTIONARY FILE UPDATES: 27 JUN 2003 HIGHEST RN 539020-41-2

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

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http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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=> s e31-e36
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               (9002-13-5/RN)
             1 57-13-6/BI
               (57-13-6/RN)
             1 143-74-8/BI
               (143-74-8/RN)
             1 7664-41-7/BI
               (7664-41-7/RN)
             1 9002-18-0/BI
               (9002-18-0/RN)
             1 34487-61-1/BI
               (34487-61-1/RN)
L70          6 (9002-13-5/BI OR 57-13-6/BI OR 143-74-8/BI OR 7664-41-7/BI OR
               9002-18-0/BI OR 34487-61-1/BI)

=> d ide can tot

L71  ANSWER 1 OF 6  REGISTRY  COPYRIGHT 2003 ACS
RN   34487-61-1  REGISTRY
CN   Phenol, 4,4'-(1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene)bis-, monosodium
     salt (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   3H-2,1-Benzoxathiole, phenol deriv.
CN   Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis-, S,S-dioxide, monosodium
     salt
OTHER NAMES:
CN   Phenol red sodium
CN   Phenol red, sodium salt
CN   Phenolsulfonephthalein sodium
AR   27664-79-5
DR   115481-77-1, 27664-79-5
MF   C19 H14 O5 S . Na
LC   STN Files:   BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM,
       IFICDB, IFIPAT, IFIUDB, MSDS-OHS, TOXCENTER, USPAT2, USPATFULL
         (*File contains numerically searchable property data)
     Other Sources:   DSL**, EINECS**, TSCA**
         (**Enter CHEMLIST File for up-to-date regulatory information)
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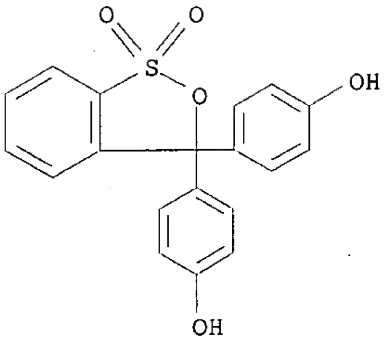

● Na

21 REFERENCES IN FILE CA (1957 TO DATE)
21 REFERENCES IN FILE CAPLUS (1957 TO DATE)

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REFERENCE 2: 137:14966

REFERENCE 3: 136:265236

REFERENCE 4: 135:319066

REFERENCE 5: 135:189831

REFERENCE 6: 133:261080

REFERENCE 7: 131:157574

REFERENCE 8: 130:71632

REFERENCE 9: 129:341459

REFERENCE 10: 127:210387

L71 ANSWER 2 OF 6 REGISTRY COPYRIGHT 2003 ACS
RN **9002-18-0** REGISTRY
CN **Agar (9CI)** (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Agar-agar (8CI)
OTHER NAMES:
CN Agar Agar Flake
CN Agargel
CN Agaropectin, mixt. with agarose
CN Agarose, mixt. with agaropectin
CN AX 30
CN Bacto-agar
CN Bengal gelatin
CN Bengal isinglass
CN Casitone
CN Ceylon isinglass
CN Chinese isinglass
CN D 100
CN D 100 (polysaccharide)
CN Deltagar LTS
CN Difco Bacto agar

CN Digenea simplex mucilage
CN E 406
CN GAM medium
CN Gelose
CN Hygicult TPC
CN Ina Agar M 8
CN Inagel N 6
CN Japan agar
CN Japan isinglass
CN Kantenmatsu
CN Layor Carang
CN Luxara 1253
CN Oxoid III
CN Oxoid L 11
CN Phytagar
CN S 10
CN S 10 (polysaccharide)
CN S 100
CN S 100 (polysaccharide)
CN T 1
CN UP 16
CN UP 37
DR 63241-81-6
MF Unspecified
CI PMS, COM, MAN
PCT Manual registration, Polyother, Polyother only
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGU, EMBASE, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, TULSA, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
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88 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
5067 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:12314

REFERENCE 2: 139:11465

REFERENCE 3: 139:7823

REFERENCE 4: 139:6171

REFERENCE 5: 139:6069

REFERENCE 6: 139:6042

REFERENCE 7: 139:5852

REFERENCE 8: 138:406893

REFERENCE 9: 138:406789

REFERENCE 10: 138:406227

L71 ANSWER 3 OF 6 REGISTRY COPYRIGHT 2003 ACS
RN **9002-13-5** REGISTRY
CN **Urease (8CI, 9CI)** (CA INDEX NAME)

OTHER NAMES:
CN E.C. 3.5.1.5
CN Urea amidohydrolase
CN **Urease LF**
MF Unspecified
CI COM, MAN
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, PIRA, PROMT, RTECS*, TOXCENTER, TULSA, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
6903 REFERENCES IN FILE CA (1957 TO DATE)
211 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
6909 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 139:12811

REFERENCE 2: 139:6211

REFERENCE 3: 139:6204

REFERENCE 4: 139:6009

REFERENCE 5: 139:4736

REFERENCE 6: 139:3193

REFERENCE 7: 139:3149

REFERENCE 8: 138:401056

REFERENCE 9: 138:398525

REFERENCE 10: 138:398447

L71 ANSWER 4 OF 6 REGISTRY COPYRIGHT 2003 ACS
RN **7664-41-7** REGISTRY
CN **Ammonia (8CI, 9CI)** (CA INDEX NAME)
OTHER NAMES:
CN Ammonia gas
CN Ammonia-14N
CN Nitro-Sil
CN R 717
CN Refrigerent R717
CN Spirit of Hartshorn
FS 3D CONCORD
DR 8007-57-6, 208990-07-2, 214478-05-4
MF H3 N
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PDLCOM*, PHARMASEARCH, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB
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Other Sources: DSL**, EINECS**, TSCA**
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$NH_3$

114987 REFERENCES IN FILE CA (1957 TO DATE)
1616 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
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REFERENCE 8: 139:16073

REFERENCE 9: 139:16072

REFERENCE 10: 139:16054

L71 ANSWER 5 OF 6 REGISTRY COPYRIGHT 2003 ACS
RN **143-74-8** REGISTRY
CN Phenol, 4,4'-(1,1-dioxido-3H-2,1-benzoxathiol-3-ylidene)bis- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 3H-2,1-Benzoxathiole, phenol deriv.
CN Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)bis-, S,S-dioxide
CN Phenol, 4,4'-(3H-2,1-benzoxathiol-3-ylidene)di-, S,S-dioxide (8CI)
OTHER NAMES:
CN .alpha.-Hydroxy-.alpha.,.alpha.-bis(p-hydroxyphenyl)-o-toluenesulfonic acid .gamma.-sultone
CN 3,3-Bis(p-hydroxyphenyl)-2,1,3H-benzoxathiole 1,1-dioxide
CN 3H-2,1-Benzoxathiole, 3,3-bis(4-hydroxyphenyl)-, 1,1-dioxide
CN Fenolipuna
CN **Phenol red**
CN Phenolsulfonephthalein
CN Phenolsulfonphthalein
CN Phenolsulphonphthalein
CN PSP
CN PSP (indicator)
CN Sulfonphthal
CN Sulphental
CN Sulphonthal
CN TF-R 2
FS 3D CONCORD
DR 2877-88-5
MF C19 H14 O5 S
CI COM
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGU, EMBASE, HODOC*, IFICDB,

IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, ULIDAT, USAN, USPAT2, USPATFULL
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Other Sources: DSL**, EINECS**, TSCA**
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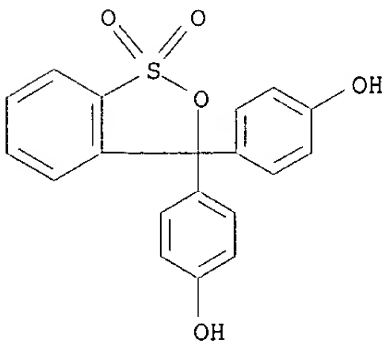


**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

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31 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
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27 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 139:8461

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REFERENCE 3: 138:363805

REFERENCE 4: 138:358106

REFERENCE 5: 138:353859

REFERENCE 6: 138:353073

REFERENCE 7: 138:352809

REFERENCE 8: 138:351453

REFERENCE 9: 138:314635

REFERENCE 10: 138:309402

L71 ANSWER 6 OF 6 REGISTRY COPYRIGHT 2003 ACS
RN **57-13-6** REGISTRY
CN **Urea (8CI, 9CI)** (CA INDEX NAME)
OTHER NAMES:
CN Aquacare
CN Aquadrate
CN B-I-K
CN Basodexan
CN Benural 70
CN Carbamide
CN Carbamimidic acid
CN Carbonyl diamide
CN Elaqua XX
CN Eucerin 10% Urea Lotion

CN Hyanit
CN Isourea
CN Keratinamin
CN Keratinamin Kowa
CN Nutraplus
CN Onychomal
CN Optigen 1200
CN Pastaron
CN Pastaron 10
CN Pastaron 20
CN Pastaron 20 soft
CN Pseudourea
CN UR
CN Urea perhydrate
CN Ureaphil
CN Ureophil
CN Urepeal
CN Urepeal L
CN Urepearl
CN Urevert
CN Varioform II
FS 3D CONCORD
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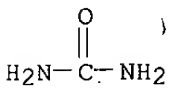
MF C H4 N2 O
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PHAR, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

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9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 139:16820

REFERENCE 2: 139:15273

REFERENCE 3: 139:13047

REFERENCE 4: 139:12811

REFERENCE 5: 139:12682

REFERENCE 6: 139:12670

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REFERENCE 8: 139:12210

REFERENCE 9: 139:12084

REFERENCE 10: 139:11970

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MOST RECENT DERWENT UPDATE: 200340 <200340/DW>
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http://www.derwent.com/userguides/dwpi_guide.html <<<

=> d all abeq tech abex tot

L113 ANSWER 1 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN **2003-120556** [11] WPIX
DNN **N2003-096041** DNC **C2003-031141**
TI Positive response biosensor for detecting analyte in environment, has first reaction system having enzyme and substrate for enzyme, and second reaction system that produces detectable state when enzyme is inhibited.
DC B04 D16 S03
IN ERBELDINGER, M; LEJEUNE, K E
PA (ERBE-I) ERBELDINGER M; (LEJE-I) LEJEUNE K E; (AGEN-N) AGENTASE LLC
CYC 100
PI WO 2002090577 A2 20021114 (200311)* EN 29p C12Q001-34
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW
US 2002182662 A1 20021205 (200311) C12Q001-34
ADT WO 2002090577 A2 WO 2002-US13692 20020502; US 2002182662 A1 US 2001-850686 20010507
PRAI US 2001-850686 20010507
IC ICM C12Q001-34
ICS C12M001-00; C12M001-34; C12Q001-00; C12Q001-44; **G01N033-53**
AB WO 200290577 A UPAB: 20030214
NOVELTY - Sensor for detecting analyte (A) comprises first reaction system

(RS1) with first enzyme (E1) and substrate for E1, where (A) inhibits E1, and second reaction system (RS2) that produces first detectable state (DS1) when E1 is inhibited, or RS1 with E1 or first substrate (S1), where (A) is substrate for E1 if ES1 includes E1/S1, and RS2 that produces DS1 when (A) is below certain concentration.

DETAILED DESCRIPTION - A sensor (I) for detecting an analyte in an environment, comprises:

(a) a first reaction system including a first enzyme and a substrate for the first enzyme, where the analyte inhibits the first enzyme, and a second reaction system that reacts to produce a first detectable state when the first enzyme is inhibited; or

(b) a first reaction system including a first enzyme or a first substrate, where the analyte is a substrate for the first enzyme if the first reaction system includes the first enzyme or the first substrate, and a second reaction system that reacts to produce a first detectable state when the analyte is below a certain concentration.

USE - (I) is useful for detecting an analyte such as a nerve agent in an environment (claimed). (I) is useful for detecting the presence of an enzyme inhibitor or a substrate deficiency with a positive signal in form of, for example, changing **pH** or color, or for monitoring the absence of an enzymatic reaction as a result of inhibitor presence or substrate deficiency.

ADVANTAGE - Compared to the prior art detection of nerve agents where detection relies on negative response of the inhibition of the cholinesterase enzyme, (I) provides a positive response signal which provides a changing signal in the presence of contamination. For example, in the case of inhibitor detection or the detection of compound/substrate deficiency, (I) improves the prior art by providing a positive signal even in the absence of an enzymatic reaction. Prior art sensors for detection of nerve agents include cholinesterase paired with its respective substrate. When nerve agents are present, cholinesterase is inhibited and the signal is retarded or nonexistent. Only in the absence of nerve agents does the enzymatically catalyzed reaction of the substrate occur. In (I), a second enzyme such as **urease** is added to a butyryl cholinesterase-based sensor. Hydroxide ions resulting from the formation of ammonium during hydrolysis of **urea** neutralize the protons produced during the hydrolysis of cholinesterase substrate (butyrylcholine). When nerve gas agents are absent both enzymatic systems are active and no **pH** change occurs. When an agent is present, hydroxide ions resulting from the hydrolysis of **urea** are not neutralized because butyryl cholinesterase is inhibited. The **pH** of the sensor then rises, resulting in positive signal.

Dwg.0/9

FS CPI EPI

FA AB; DCN

MC CPI: B04-L05; **B11-C07B1**; B11-C08E3; B12-K04E; D05-A01A2; D05-A01B3; D05-H09

EPI: S03-E03X; S03-E04E; **S03-E14H4**

TECH UPTX: 20030214

TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Sensor: In (I), the reaction of the first reaction system produces a second detectable state, different from the first detectable state. The reaction of the first reaction system causes **pH** to change in a first direction and the reaction of the second reaction system causes **pH** to change in a second direction, opposite of the first direction. The second reaction system comprises a second enzyme and a substrate for the second enzyme. The first enzyme is a hydrolase or cholinesterase, and the second enzyme is a different hydrolase. The first detectable change is a colorimetric change. The reaction of the first reaction system produces a second detectable state, different from the first detectable state. The first detectable state arises from the presence of a first **pH** sensitive dye producing a colorimetric change and the second detectable state is a colorimetric change different from the colorimetric change of the first

detectable state. The reaction of the first reaction system causes a first colorimetric change and the reaction of the second reaction system causes a second colorimetric change, where the second colorimetric change is different from the first colorimetric change. The reaction of the first reaction system causes **pH** to change in a first direction and the reaction of the second reaction system causes a **pH** sensitive colorimetric change when the first enzyme is inhibited or when the analyte is below a certain concentration. The first and second enzyme is immobilized in a polymer medium. The reaction of the analyte catalyzed by the first enzyme produces a second detectable state, different from the first detectable state. The reaction of the analyte catalyzed by the first enzyme causes **pH** to change in a first direction and the reaction of the second reaction system causes **pH** to change in a second direction, opposite of the first direction. (I) comprises a first reaction system that is reduced in reactivity by the presence of the analyte, and at least a second reaction system that reacts to produce a first detectable state when the first reaction system is inhibited. (I) comprises a first reaction system including a first compound that produces a reaction with the analyte, and at least a second reaction system that reacts to produce a first detectable state when the analyte is below a certain concentration.

ABEX UPTX: 20030214

EXAMPLE - Detection of diisopropyl fluorophosphate (DFP) using a positive response enzymatic biosensor with butyrylcholinesterase (BChE) immobilized in polyurethane, **urease** and a **pH**-sensitive dye (cresol red) was as follows: Hydroxide ions resulting from the formation of **ammonia** neutralized any protons produced during hydrolysis of butyrylcholine. No color change from the original yellow was observed as a result of stabilized **pH** when both enzymes were active. In the presence of DFP, however BChE was significantly inhibited while **urease** remained active. Only hydroxide ions were produced and **pH** increased accordingly. Increasing **pH** resulted in a color change of incorporated dye and the sensor changed from yellow to red. The color change was easily recognized by the naked eye. To remove any subjectivity from the experimental procedures, a solid-phase Minolta CM-500d solid spectrophotometer was used to monitor the sensor's color change. This unit used a three-dimensional color coordinate system to define colors and intensity. The biopolymer containing cresol red developed yellow color when **pH** was below 7.0 and turned to red at a **pH** around 8.8. Each kinetic reaction was performed in duplicate. It was clear that a positive response was observed in the presence of DFP, a powerful inhibitor of the cholinesterase sensing enzyme used in this sensor construct.

L113 ANSWER 2 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN **2003-013562** [01] WPIX
DNN **N2003-009786** DNC **C2003-003115**
TI Method for determining helicobacter pylori-associated intragastral **urease** activity.
DC B04 D16 S03
IN AKHMETSHIN, R Z; KHASANOV, R SH; LOGINOVSKAYA, V V; MELNIKOVA, Z M; NIZHEVICH, A A; SATAEV, V U
PA (NIZH-I) NIZHEVICH A A; (UYBA-R) UNIV BASHKIR MED
CYC 1
PI RU 2189591 C1 20020920 (200301)* G01N033-48 <--
ADT RU 2189591 C1 RU 2001-102196 20010124
PRAI RU 2001-102196 20010124
IC ICM **G01N033-48**
ICS **G01N033-49**
AB RU 2189591 C UPAB: 20030101
NOVELTY - Method for detecting the degree of bacterial seeding volume of gastric mucosa at Helicobacter gastritis, gastroduodenitis and ulcerous disease.

DETAILED DESCRIPTION - A **biopsy** fragment of gastric mucosa is taken and put into commercial solution. Incubation mixture is subjected for exposure, PEC- colorimetry is conducted at 540 nm wave length to compare optic density with incubation time of **biopsy** fragment and the weight of **biopsy** fragment (units of optic density/mg **biopsy** material/min). At **urease** activity values ranged 11.5-4 U one should detect a low degree of bacterial seeding volume of gastric mucosa, at its value within 5-10 U a moderate degree is detected and in case its value ranges 11-19 U a high degree of Helicobacter pylori seeding volume is concluded on. The method is of high specificity, enables user to conduct a semi-quantitative analysis of bacterial seeding volume of gastric mucosa.

USE - Medicine, medicinal microbiology and gastroenterology.

ADVANTAGE - Higher efficiency.

Dwg.0/0

FS CPI EPI
FA AB
MC CPI: B04-F10; B04-L01; B11-A01; B11-A02; B11-C08E1; B11-C08E3; B12-K04A4; B12-K04E; D05-A02; D05-H04; D05-H08; D05-H09
EPI: S03-E14H; S03-E14H1

L113 ANSWER 3 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN **2001-464387** [50] WPIX
CR 2001-335013 [35]
DNC **C2001-140251**
TI A device for the in vivo detection of **urease**-producing Helicobacter in the stomach.
DC B04 D16
IN **MARSHALL, B**
PA (MARS-I) MARSHALL B
CYC 1
PI US 2001012623 A1 20010809 (200150)* 6p C12Q001-04 <--
US 6479278 B2 20021112 (200278) C12M001-34
ADT US 2001012623 A1 Cont of US 1995-489816 19950613, CIP of US 1997-832332 19970326, US 2001-824870 20010403; US 6479278 B2 Cont of US 1995-489816 19950613, CIP of US 1997-832332 19970326, US 2001-824870 20010403
FDT US 2001012623 A1 CIP of US 6228605; US 6479278 B2 CIP of US 6228605
PRAI US 2001-824870 20010403; US 1995-489816 19950613; US 1997-832332 19970326
IC ICM C12M001-34; **C12Q001-04**
AB US2001012623 A UPAB: 20021204
NOVELTY - A diagnostic device for the in vivo detection of **urease** -producing Helicobacter in the upper stomach, is new.

DETAILED DESCRIPTION - A diagnostic device for the detection of **urease** producing Helicobacter in a subjects stomach comprising a soluble carrier containing a combination of a **pH indicator** (pHI1) with a **pH** range of 5.5-9.0 (pHI1 has an first indicium to **indicate** an alkaline **pH** range and a second indicium to **indicate** an acidic **pH** range) and a second **pH indicator** (pHI2) with a **pH** range of 5.5-9.0 (pHI2 has a first indicium to **indicate** an acidic **pH** and a third indicium to **indicate** an alkaline **pH** range, and a reagent which reacted with **urease** to produce **ammonia**). The pHI1 first indicium and the pHI2 first indicium are the same. The pHI1 second indicium and the pHI2 third indicium are different from one anther and from the pHI1 and pHI2 first indicia. The pHI1 and pHI2 **indicator** combination react to a presence or absence of **urease** producing Helicobacter by change, or lack of change of indicia.

If pHI1 and pHI2 combine to **indicate** an acidic **pH** , this **indicates** an absence of the Helicobacter (the stomach is acidic and there are no **urease**-producing Helicobacter. If the pHI1 and pHI2 combine to **indicate** an alkaline **pH**, this

**indicates** that the stomach is alkaline and no determination can be made, therefore producing a false positive result.

If the pHI1 **indicates** an acidic **pH** and the pHI2 **indicates** an alkaline **pH**, this **indicates** the presence of **ammonia** and the presence of **urease** producing Helicobacter.

USE - The device is used for the in vivo detection of **urease** -producing Helicobacter in the stomach.

ADVANTAGE - The device is used in vivo, eliminating the need for a **biopsy**.

Dwg.0/1

FS CPI

FA AB; DCN

MC CPI: B04-C01; B04-F10; B04-L01; B04-N04; B11-A02; B11-C08E1; B11-C08E3; **B12-K04A4**; B12-K04E; D05-A02; D05-H04; D05-H08; D05-H09; D05-H10

TECH UPTX: 20010905

TECHNOLOGY FOCUS - INSTRUMENTATION AND TESTING - Preferred Device: The device further comprises first and second dense carriers which are soluble in gastric fluids and have densities that cause them to descend through the stomachs fluids to the stomach's gastric mucosa. The first dense carrier is combined with the pHI1 and the second dense carrier is combined with the pHI2. The container is a soluble capsule comprising the first carrier and second carrier. The dense carrier materials sorb the **indicators** and dissolve in the gastric fluids within 5 minutes after reaching the stomach's gastric mucosa. The dense carrier materials are in the form of beads which facilitate the dispersal of the **indicators** over the mucosa.

The indicium is color. The pHI1 first indicium is one color at an acidic **pH** and the second indicium is a second color at an alkaline **pH**. The pHI2 first indicium is one color at an acidic **pH** and the second indicium is a third color at an alkaline **pH**. each of the pHI1 first indicium, and the pHI2 first indicium can be the same color and/or the pHI1 second indicium and the pHI2 third indicium are different colors from one another and from the pHI1 first indicium and the pHI2 first indicium.

Th reagent is **urea**.

ABEX UPTX: 20010905

ADMINISTRATION - The device may be swallowed by the patient.

EXAMPLE - Beads comprising bromothymol blue **indicator**, buffer ( **pH** 6) and sugar beads and **phenol red indicator**, buffer (**pH** 6), sugar beads and **urea** were encapsulated into a quick dissolving gelatin capsule for delivery into the stomach in mass and undiluted.

L113 ANSWER 4 OF 20 WPIX (C) 2003 THOMSON DERWENT

AN 2001-354606 [37] WPIX

DNN N2001-257673 DNC C2001-109767

TI Gastrointestinal **sampling** device for diagnosis of certain gastrointestinal pathogens, comprises drag material for obtaining gastrointestinal **sample**, and protective sheath for deployment about the drag material.

DC A96 P31

IN **MARSHALL, B**; WONG, A M

PA (UYWA-N) UNIV WESTERN AUSTRALIA

CYC 94

PI WO 2001015604 A1 20010308 (200137)* EN 51p A61B010-00

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

AU 2000068115 A 20010326 (200137) A61B010-00
JP 2003508106 W 20030304 (200319) 43p A61B010-00
ADT WO 2001015604 A1 WO 2000-AU1047 20000831; AU 2000068115 A AU 2000-68115 20000831; JP 2003508106 W WO 2000-AU1047 20000831, JP 2001-519821 20000831
FDT AU 2000068115 A Based on WO 200115604; JP 2003508106 W Based on WO 200115604
PRAI AU 1999-4609 19991213; AU 1999-2541 19990831
IC ICM A61B010-00
AB WO 200115604 A UPAB: 20010704
NOVELTY - A gastrointestinal **sampling** device (10) comprises a drag material (12) for obtaining a gastrointestinal **sample**; and a protective sheath (22) for deployment about the drag material. The drag material is enclosed by the protective sheath upon removal from the gastrointestinal tract.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(a) a method of gastrointestinal **sampling**, comprising swallowing the gastrointestinal **sampling** device; allowing a time for the drag material to obtain the gastrointestinal **sample**; withdrawing the drag material so that upon withdrawal, the protective sheath encloses the drag material; and recovering the gastrointestinal **sample** for testing; and

(b) a method of manufacturing a gastrointestinal **sampling** device, comprising encasing the drag material and the protective sheath in a capsule.

USE - The inventive device is used for the diagnosis of certain gastrointestinal pathogens (claimed). It is useful for obtaining **samples** from under the gastric mucus and between the epithelial cells of the stomach.

ADVANTAGE - The inventive device increases the epithelial cells removed from the stomach lining without causing additional discomfort to the patient. Further, it is capable of **sampling** microorganisms from specific regions of the gastrointestinal tract without becoming contaminated with microorganisms from other regions.

DESCRIPTION OF DRAWING(S) - The figure shows a front side view of the gastrointestinal **sampling** device.

Gastrointestinal **sampling** device 10
Drag material 12
Capsule 14
Weight 16
Glue 18
Protective sheath 22
Dwg.1/11
FS CPI GMPI
FA AB; GI
MC CPI: A12-V03C2
TECH UPTX: 20010704
TECHNOLOGY FOCUS - INSTRUMENTATION AND TESTING - Preferred Component: The drag material includes a **pH indicator** or **urease indicator**, and is folded within a capsule. The capsule (14) carries the drag material and the protective sheath. It is constructed of a non-gelatin dissolvable material, and comprises at least two parts joined together with water-soluble glue (18). The protective sheath is deployed about the drag material by movement from a retracted position to an extended position. It is assisted in deployment by the use of a spring device. The retracted position is held in place by an edible glue. The spring device is attached with adhesive to the inner surface of the protective sheath. A non-absorbent filament has two ends. The first end is attached to one end of the protective sheath. The second end is attached to a weight (16), preferably a dissolvable weight. The weight assists with the extension of the drag material in the stomach of a patient. A rubber ring is attached to the sheath, and has a similar diameter to the sheath and assists in the deployment of the sheath. Preferred Properties: The capsule is more than 2 cm long, and is no more

than 0.9 cm in diameter.
TECHNOLOGY FOCUS - POLYMERS - Preferred Material: The drag material is an absorbent string, cotton, **sampling** cloth, wool, acrylic, nylon, plastic, chain links, and/or finely woven metal. It is 50% wool and 50% acrylic, and is coated with a bacterial adherent which is poly-L-lysine. The spring device is a nylon line or a Teflon coated stainless steel thread.

L113 ANSWER 5 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN **2001-335013** [35] WPIX
CR 1995-178631 [23]; 2001-464387 [50]
DNC **C2001-103414**
TI Detecting **urease**-producing Helicobacter in a patient's stomach, by administering encapsulated dense carrier treated with reagent **indicators**, one containing **urea**, and observing color changes in the gastric mucosa.
DC B04 D16
IN **MARSHALL, B J**
PA (MARS-I) MARSHALL B J
CYC 1
PI US 6228605 B1 20010508 (200135)* 8p C12Q001-04 <--
ADT US 6228605 B1 CIP of US 1993-142600 19931028, Cont of US 1995-489816 19950613, US 1997-832332 19970326
PRAI US 1995-489816 19950613; US 1993-142600 19931028; US 1997-832332 19970326
IC ICM **C12Q001-04**
AB US 6228605 B UPAB: 20010905
NOVELTY - Detecting **urease**-producing Helicobacter in a patient's stomach using a dense carrier (C) which is divided into 2 separate groups which are combined with separate reagent **indicators**, one of which contains **urea** (U), administering (C) and (U) encapsulated in a solid capsule (SC) to the patient, dissolving SC in stomach fluids, contacting the reagents with a gastric mucosa and observing color changes.

DETAILED DESCRIPTION - Detecting (M), in vivo, the presence or absence of **urease** producing Helicobacter in a patient's stomach involves:

(a) administering to a patient a pharmaceutically acceptable soluble container containing a combination comprising a first **indicator** having a **pH** indicium range of from about 5.5-9.0 and having a first indicium for **indicating** an acidic **pH** range and a second indicium for **indicating** an alkaline **pH**, and a second **indicator** combination, where the second **indicator** combination has a second **pH indicator** having a **pH** indicium range of from about 5.5-9.0 and having a second **pH indicator** first indicium for **indicating** an acidic **pH** range and a second **pH indicator** third indicium for **indicating** an alkaline **pH** range, and a reagent to react with **urease** in the stomach to form an alkaline product, the first **pH indicator** first indicium and the second **pH indicator** combination first indicium being the same, the first **pH indicator** second indicium and the second **pH indicator** combination third indicium being different from one another, from the first **pH indicator** first indicium and from the second **pH indicator** first indicium;

(b) dissolving the soluble container in the patients stomach fluids;

(c) contacting the patients gastric mucosa with the first **pH indicator** and the second **indicator** combination; and

(d) observing the first **pH indicator** and the second **indicator** combination in the patient's stomach where if:

(i) the first **pH indicator** first indicium and the second **indicator** combination first indicium **indicate** an acidic **pH** range, then the stomach is acidic,

**indicating** an absence of **urease** producing Helicobacter;

(ii) the first **pH indicator** second indicium and the second **indicator** combination third indicium **indicate** an alkaline **pH** range, then the stomach is alkaline, and thus no determination can be made regarding the presence or absence of **urease** producing Helicobacter; or

(iii) the first **pH indicator** first indicium **indicates** an acidic **pH** range and the second **indicator** combination third indicium **indicates** an alkaline **pH** range, then the stomach is acidic **indicating** the presence of **urease** producing Helicobacter.

USE - (M) Is useful for diagnosing gastrointestinal disorders caused by **urease** producing Helicobacter by determining the presence or absence of **urease** within a subject's stomach by:

(a) administering to the subject between approximately 1 and 20 g of **urea**/kg of dense, pharmaceutically acceptable carrier, the carrier having a density greater than body fluids, the **urea** being carried by the dense carrier;

(b) drinking a predetermined quantity of a liquid, delivering the capsule through stomach fluids to the subject's gastric mucosa, the dense carrier causing the first **pH indicator**, the second **pH indicator** and the **urea** to descent through the stomach fluids;

(c) dissolving the capsule in gastric juices contained in the subjects stomach, thus placing the carrier, the **pH indicators** and the **urea** in direct contact with the gastric mucosa;

(d) reacting the **urea** with any **urease** present to produce **ammonia**, thus raising the **pH** proximate to the **indicators** within the subject's stomach; and

(e) viewing the first **pH indicator** indicium and the second **pH indicator** indicium for an **indication** of **pH** change, the **pH** change **indicating** the absence or presence of Helicobacter, where when viewed if:

(i) the first indicium of the first **pH indicator** and the first indicium of the second **pH indicator** are a color that **indicate** an acidic range, then there is an absence of **urease** and a negative **indication** of the presence of the Helicobacter;

(ii) the second indicium of the first **pH indicator** and the third indicium of the second **pH indicator** are a color which **indicate** an alkaline **pH** range, then no determination regarding a gastrointestinal disorder can be made; or

(iii) the first indicium of the first **indicator** is a color that **indicates** an acidic range and the third indicium of the second **pH indicator** is a color that **indicates** **urea** in the second **pH indicator** combination is reacting with the **urease** to create an alkaline **pH**, then there is a positive **indication** of a presence of Helicobacter, thus **indicating** a Helicobacter caused gastrointestinal disorder.

An acidic fluid is further administered to the subject prior to administering the capsule, thus eliminating false positive readings (claimed).

Dwg.0/1

FS CPI

FA AB; DCN

MC CPI: B04-C01; B04-F10; B04-L05; B04-N03; B11-A02; B11-C08E1; B11-C08E3; B11-C09; **B12-K04A4**; B12-K04E; D05-A02C; D05-H04; D05-H08; D05-H09; D05-H10

TECH UPTX: 20010625

TECHNOLOGY FOCUS - BIOTECHNOLOGY - Preferred Method: Both the first

**indicator** and the second **indicator** combination are carried by a pharmaceutically acceptable dense carrier having a density greater than body fluids, the pharmaceutically acceptable dense carrier delivering the first **indicator** and the second **indicator** combination to the gastric mucosa. The dense carrier is dissolved in the gastric fluids after the soluble container is dissolved. The pharmaceutically acceptable carrier is sugar beads, and carrier has a diameter from about 0.2-3.0 mm, thus facilitating dispersal of the **indicators** over the gastric mucosa.
A first portion of the carrier is coated with the first **indicator** and a second portion of the carrier is coated with the second **indicator** combination. The first **indicator** is sorbed by a first portion of the carrier and the second **indicator** combination is sorbed by a second portion of the carrier. A buffer is added to the dense carrier in order to neutralize the **pH** of the dense carrier. The reagent is **urea**, and the **urea** reacts with the **urease** produced by Helicobacter to generate **ammonia**. The first **pH indicator** and the second **pH indicators** are weak acids that exhibit a first color that **indicates** an acid **pH** range and a second color that **indicates** an alkaline range.
The first **pH indicator** is bromothymol blue (dibromothymolsulfonphthalein) and the second **pH indicator** is **phenol red** ( **phenolsulfonphthalein**). (M) preferably involves:
(a) providing at least two separate groups of pharmaceutically acceptable **pH indicator** sorbing dense carriers having a density greater than body fluids to cause the carriers to descend through the patient's gastric fluids to the patient's gastric mucosa;
(b) combining a first of the two separate groups of dense carriers with a pharmaceutically acceptable first **pH indicator** that exhibits a first indicium when exposed to an acidic **pH** range and a second indicium when exposed to an alkaline **pH** range;
(c) combining a second of the two separate groups of dense carriers with a combination of a pharmaceutically acceptable second **pH indicator** and **urea**, the second **pH indicator** exhibiting a first indicium when exposed to an acidic **pH** range and a third indicium when exposed to an alkaline **pH** range, the first **pH indicator** first indicium and the second **pH** second **indicator** first indicium being the same, the first **pH indicator** second indicium and the second **pH indicator** combination third indicium being different from one another and from the first **pH indicator** first indicium and the second **pH indicator** first indicium;
(d) administering the first dense carrier and the second dense carrier to a patient;
(e) contacting the patient's gastric mucosa with the first **indicator**, the second **indicator** and the **urea** contained within the carriers;
(f) raising **pH** levels proximate to the second **pH indicator** and **urea** in response to the increased **ammonia** generated by a reaction between the **urea** and the **urease**;
(g) observing the **indication** of **urease** producing Helicobacter in the patient's stomach by observing the first **pH indicator** and the second **pH indicator** combination, where:
(i) both the first indicium of the first **indicator** and the first indica of the second **indicator** combination **indicating** an acidic **pH** range **indicating** an absence of Helicobacter and that the stomach is acidic;
(ii) both the second indicium of the first **indicator** and the

second indicium of the second **indicator** combination **indicating** a false positive result and that the stomach is alkaline; or
(iii) the second indicium of the first **indicator** **indicating** an acidic **pH** range and the second indicium of the second **indicator** combination **indicating** an alkaline **pH** range, signifies the presence of **urease** producing Helicobacter and that the stomach is acidic;
(h) determining, based on observation (i), that the stomach is acidic and that there is an absence of **urease** producing Helicobacter, observation (ii), that the stomach is alkaline and no determination can be made, or observation (iii), that there is a presence of **urease** producing Helicobacter in the patient's stomach.
ABEX UPTX: 20010625
EXAMPLE - No relevant example is given.

L113 ANSWER 6 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN **2000-560698** [52] WPIX
DNN **N2000-415093** DNC **C2000-167388**
TI Measurement of **urea** nitrogen for diagnosing renal diseases, comprises detecting an optical change in **pH** in the liquid phase by **ammonia** formed by reacting **urea** in liquid phase containing specific buffer solutions.
DC B04 D16 S03
PA (IATR) IATRON LAB INC
CYC 1
PI JP 2000189196 A 20000711 (200052)* 5p C12Q001-58 <--
ADT JP 2000189196 A JP 1998-376480 19981225
PRAI JP 1998-376480 19981225
IC ICM **C12Q001-58**
ICS **G01N033-62**
AB JP2000189196 A UPAB: 20001018
NOVELTY - Measurement of **urea** nitrogen comprises reacting **urea** and **urease** in liquid phase containing two or more kinds of buffer solutions and detecting optically the change in **pH** in liquid phase by **ammonia** formed in the reaction.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the reagent for **urea** nitrogen measurement.
USE - For diagnosing renal diseases.
ADVANTAGE - Wide range of concentration of **urea** nitrogen is determined. The liquid reagent is inexpensive and stable for long duration. The effect of measurement of **urea** nitrogen is improved.
Dwg.1/2
FS CPI EPI
FA AB; GI; DCN
MC CPI: B04-B04B1; B04-L05; B10-A01; **B10-A13C**; **B11-C07B1**; B11-C08E3; **B12-K04A**; D05-A02C; D05-H09
EPI: **S03-E14H**

L113 ANSWER 7 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN 2000-221147 [19] WPIX
DNN N2000-165428
TI Fabrication of an encapsulated pharmaceutical detecting **urease** in the stomach - for identification of helicobacter pilori infection by means of phenol sulphonethalein and thymol sulphone thalein reagents, with buffer and saccharose and urea modified by carbon 14. NoAbstract.
DC S03
IN **MARSHALL, B J**
PA (MARS-I) MARSHALL B J
CYC 1
PI MX 9703147 A1 19981001 (200019)* G01N033-573 <--
ADT MX 9703147 A1 MX 1997-3147 19970429

PRAI MX 1997-3147 19970429
IC ICM **G01N033-573**
FS EPI
FA NOAB
MC EPI: S03-E14H4

L113 ANSWER 8 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN **1998-437884** [38] WPIX
DNC **C1998-133216**
TI Determination of Helicobacter pylori infection levels - by quantitative determination of **ammonia** production in a **urea** solution containing a **tissue sample.**
DC B04 D16
PA (DEJA-I) DEJACO R
CYC 1
PI AT 9400611 A 19980715 (199838)* 9p C12Q001-58 <--
AT 404840 B 19990115 (199908) C12Q001-58 <--
ADT AT 9400611 A AT 1994-611 19940323; AT 404840 B AT 1994-611 19940323
FDT AT 404840 B Previous Publ. AT 9400611
PRAI AT 1994-611 19940323
IC ICM **C12Q001-58**
AB AT 9400611 A UPAB: 19980923
Use of a device for quantitative determination of **ammonia** in aqueous **samples**, particularly test strips with a concentration dependent colour change, for determination of levels of Helicobacter pylori by reaction of a **tissue sample** with a **urea** solution, such that the concentration of **ammonia** corresponds to that of human blood.
USE - The technique is useful for determination of levels of H. pylori infection.
Dwg.0/0
FS CPI
FA AB
MC CPI: B04-F10; B05-C01; **B10-A13C**; **B11-C07B1**; **B12-K04A4**; D05-H04

L113 ANSWER 9 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN **1995-283092** [37] WPIX
DNN **N1995-215475** DNC **C1995-127739**
TI Test compsns. for detection of Helicobacter pylori **urease** - contg. **urea** and a combination of **pH indicator** dyes.
DC B04 D16 S03
IN JACKSON, F W
PA (CHEK-N) CHEK-MED SYSTEMS INC
CYC 20
PI US 5439801 A 19950808 (199537)* 7p C12Q001-58 <--
WO 9521937 A1 19950817 (199538) EN 27p C12Q001-58 <--
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
W: CA JP MX
CA 2160916 C 19990330 (199931) C12Q001-58 <--
MX 9504461 A1 19990501 (200056) C12Q001-58 <--
MX 196023 B 20000414 (200124) G01N033-048 <--
ADT US 5439801 A US 1994-195954 19940214; WO 9521937 A1 WO 1995-US1608 19950206; CA 2160916 C CA 1995-2160916 19950206; MX 9504461 A1 MX 1995-4461 19951020; MX 196023 B MX 1995-4461 19950206
PRAI US 1994-195954 19940214
REP US 4748113; US 5258178; US 5260057; US 5314804
IC ICM **C12Q001-58**; **G01N033-048**
ICS A01N001-02; C12Q001-00; **C12Q001-04**; C12Q001-62; **G01N033-48**
AB US 5439801 A UPAB: 19950921
Test compsns. for diagnosis of gastric disease by detection of

**urease** associated with Helicobacter pylori in a **biopsy** specimen contain **urea** and 2 **pH indicator** dyes such that the colour change **indicating** the presence of H. pylori initially occurs at an acid **pH** and the resulting colour is distinct from the colour of the **biopsy** specimen. Also claimed is a compsn. as above contg. 0.5-2 wt.% **urea**, 0.4-1.4 wt.% agar, 0.2-1.2 wt.% N-octyl glucose and 1.5-3.5 mM NaH2PO4, the balance comprising a preservative, the **indicator** dyes and water, where the compsn. is in the form of a gel soft enough to envelop a **biopsy** specimen pushed into it and has an initial acid **pH**

USE - The compsns. are esp. useful for diagnosis of peptic ulcers.

ADVANTAGE - Compared with prods. based on **phenol red**, e.g. 'Clotest' (RTM), the compsns. give a more distinctive colour change at a lower **pH**, which excludes false positive due to other bacteria, e.g. Proteus and Pseudomonas spp..

Dwg.0/0

FS CPI EPI
FA AB; DCN
MC CPI: B04-C02D; B04-L05; B05-B02A3; B06-C; B10-A07; **B10-A13C**; B10-A16; B10-E02; **B11-C07B1**; **B12-K04A**; D05-A02C; D05-H04
EPI: **S03-E14H9**

L113 ANSWER 10 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN **1995-206245** [27] WPIX
CR 1993-320766 [40]
DNN **N1995-161623** DNC **C1995-095613**
TI Device for detecting Helicobacter pylori by measuring **urease** levels - comprises a **urease** substrate, an **ammonia** -sensitive **indicator** and sulphamic acid.
DC B04 D16 S03
IN BOGUSLASKI, R C; CARRICO, R J
PA (SERI-N) SERIM RES CORP
CYC 1
PI US 5420016 A 19950530 (199527)* 8p C12Q001-58 <--
ADT US 5420016 A CIP of US 1992-856992 19920324, US 1994-198236 19940218
FDT US 5420016 A CIP of US 5314804
PRAI US 1994-198236 19940218; US 1992-856992 19920324
IC ICM **C12Q001-58**
ICS **C12Q001-04**; **G01N021-00**
AB US 5420016 A UPAB: 19950712
Multilayer test device for detecting **urease** in biological **tissue** specimens comprises: (a) a substrate element comprising a matrix contg. a **urease** substrate; (b) a diffusion element comprising a **NH3**-permeable and water-impermeable membrane; (c) an **indicator** element comprising a matrix contg. a **NH3** -sensitive **indicator**. The **indicator** and diffusion elements are contiguous and one contains sufficient sulphamic acid to react with **NH3** to produce a desired sensitivity. The device is designed so that the **tissue** specimen can be placed between the substrate and diffusion elements. Also claimed is a test kit comprising an aq. rehydrating soln., a buffer with a **pH** of 7-9 and a device as above where the **indicator** is the dried residue of a **pH** **indicator** with a pKa of 2-6.

USE - The device may be used to detect **urease**-producing microorganisms, esp. Helicobacter pylori, in human gastric mucosa **biopsy** specimens.

ADVANTAGE - The sulphamic acid is included to scavenge pre-existing **NH3** so that only **urease**-generated **NH3** is detected.

Dwg.1/5

FS CPI EPI

FA AB; GI; DCN
MC CPI: B04-B04L; B04-F10A; B04-L05; B05-C03; B11-C08E1; **B12-K04A**; D05-H04
EPI: S03-E09E; **S03-E14H6**

L113 ANSWER 11 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN **1995-178631** [23] WPIX
CR 2001-335013 [33]
DNN **N1995-140283** DNC **C1995-082674**
TI In vivo detection of **urease**-producing Helicobacter - using two reagents which react differently, through colour change, to the increase in **pH**.
DC B04 D16 S03
IN **MARSHALL, B; MARSHALL, B J**
PA (MARS-I) MARSHALL B; (MARS-I) MARSHALL B J
CYC 60
PI WO 9511672 A1 19950504 (199523)* EN 16p A61K009-28
RW: AT BE CH DE DK ES FR GB GR IE IT KE LU MC MW NL OA PT SD SE SZ
W: AM AT AU BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU JP KE KG KP KR KZ LK LR LT LU LV MD MG MN MW NL NO NZ PL PT RO RU SD SE SI SK TJ TT UA US UZ VN
AU 9481270 A 19950522 (199534) A61K009-28
EP 725633 A1 19960814 (199637) EN A61K009-28
R: AT CH DE GB IE LI LU
JP 09506246 W 19970624 (199735) 17p C12Q001-58 <--
BR 9407718 A 19971111 (199801) A61K009-28
CN 1139381 A 19970101 (199809) A61K009-28
ADT WO 9511672 A1 WO 1994-US12332 19941025; AU 9481270 A AU 1994-81270 19941025; EP 725633 A1 WO 1994-US12332 19941025, EP 1995-900448 19941025; JP 09506246 W WO 1994-US12332 19941025, JP 1995-512826 19941025; BR 9407718 A BR 1994-7718 19941025, WO 1994-US12332 19941025; CN 1139381 A CN 1994-194624 19941025
FDT AU 9481270 A Based on WO 9511672; EP 725633 A1 Based on WO 9511672; JP 09506246 W Based on WO 9511672; BR 9407718 A Based on WO 9511672
PRAI US 1993-142600 19931028
REP US 5262156; US 5314804
IC ICM A61K009-28; **C12Q001-58**
ICS A61K009-48; A61K009-54; **C12Q001-04**; **G01N021-77**
AB WO 9511672 A UPAB: 20010625
In vivo detection of **urease**-producing Helicobacter (I) in the upper stomach comprises: (i) obtaining at least 2 separate gps. of dense carriers; (ii) combining the first gp. with a first reagent **indicator** (R1); (iii) combining the second gp. with a combination of a second reagent **indicator** (R2) and **urea**; (iv) encapsulating R1 and the R2-**urea** combination in a soluble capsule; (v) administering the capsule to a patient; (vi) causing the capsule to migrate to the gastric mucosa through the density of the carriers; (vii) dissolving the capsule contg. R1 and R2-**urea** in the gastric juices, such that R1 and R2-**urea** are placed in direct contact with the gastric mucosa, allowing the **urea** to react with any **urease** present in the stomach, thus creating **ammonia**, the **ammonia** causing the **pH** within the stomach to increase, this causing R1 and R2 to react to the increase in **pH**, the reaction being viewed through endoscopy. A diagnostic device is also provided.

USE - The method is useful for in vivo diagnosis of upper gastrointestinal diseases, esp those mediated by infection of gastric mucosa by Helicobacter pylori.

ADVANTAGE - The novel method of detecting alkaline **pH** change in vivo cuts down the number of **biopsies** required and is safe for patients having any bleeding tendencies. It is also a rapid, low cost test. Additionally, through the colour change, it can be determined if the change is a true positive or a false positive reaction.

Dwg.0/1
FS CPI EPI
FA AB; GI; DCN
MC CPI: B04-F10; B04-L05; **B10-A13C**; **B11-C07B1**; **B12-K04A**; D05-H04
EPI: S03-E04E; **S03-E14H9**

L113 ANSWER 12 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN **1993-320766** [40] WPIX
CR 1995-206245 [27]
DNN **N1993-247028** DNC **C1993-142812**
TI Detection of **urease** in human biological **tissue** - by contact with buffered **urea** and using formed **ammonia** to change colour of **indicator**, used esp. for diagnosing Helicobacter pylori infection.
DC B04 D16 S03
IN BOGUSLASKI, R C; CARRICO, R J
PA (SERI-N) SERIM RES CORP
CYC 20
PI WO 9319200 A1 19930930 (199340)* 26p C12Q001-58 <--
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
W: AU CA JP
AU 9337361 A 19931021 (199407) C12Q001-58 <--
US 5314804 A 19940524 (199420) 7p C12Q001-58 <--
EP 633946 A1 19950118 (199507) EN
R: DE DK FR GB IT SE
JP 07505279 W 19950615 (199532) C12Q001-58 <--
EP 633946 A4 19960626 (199644) C12Q001-58 <--
JP 2638682 B2 19970806 (199736) 8p C12Q001-58 <--
CA 2131317 C 19980224 (199817) C12Q001-58 <--
EP 633946 B1 20010801 (200144) EN C12Q001-58 <--
R: DE DK FR GB IT SE
DE 69330515 E 20010906 (200159) C12Q001-58 <--
ADT WO 9319200 A1 WO 1993-US1819 19930303; AU 9337361 A AU 1993-37361 19930303; US 5314804 A US 1992-856992 19920324; EP 633946 A1 EP 1993-906267 19930303, WO 1993-US1819 19930303; JP 07505279 W JP 1993-516569 19930303, WO 1993-US1819 19930303; EP 633946 A4 EP 1993-906267 ; JP 2638682 B2 JP 1993-516569 19930303, WO 1993-US1819 19930303; CA 2131317 C CA 1993-2131317 19930303; EP 633946 B1 EP 1993-906267 19930303, WO 1993-US1819 19930303; DE 69330515 E DE 1993-630515 19930303, EP 1993-906267 19930303, WO 1993-US1819 19930303
FDT AU 9337361 A Based on WO 9319200; EP 633946 A1 Based on WO 9319200; JP 07505279 W Based on WO 9319200; JP 2638682 B2 Previous Publ. JP 07505279, Based on WO 9319200; EP 633946 B1 Based on WO 9319200; DE 69330515 E Based on EP 633946, Based on WO 9319200
PRAI US 1992-856992 19920324
REP EP 458231; US 3876502; US 4748113; US 4830010; US 4923801; 2.Jnl.Ref
IC ICM **C12Q001-58**
ICS C12M001-40; C12Q001-26; C12Q001-62; **G01N021-77**
ICA C12Q001-00; **C12Q001-04**
ICI **C12Q001-04**, C12R001:
AB WO 9319200 A UPAB: 20011012
**Urease** (I) is detected in a biological **tissue sample** by (i) placing the **sample** on a diffusion element permeable to **NH3**; (2) treating the **sample** with a **pH**-optimised soln. of **urea** substrate (II) so as to produce **NH3**; (3) allowing **NH3** to diffuse through the diffusion element so that it contacts an **indicator** element on the other side; and (4) observing reaction of **NH3** with the **indicator**.
Also new are multilayer test devices and kits for this process.
Preg. (II) is present in a substrate element, comprising a matrix and **pH** 7-9 buffer. The indica element comprises a matrix contg. a

**pH**-sensitive dye of pKa less than 8 (esp. 2-6).
The **sample** is palced on the diffusion element, then the subst6rate placed on top, partic. by folding over the support to which both elements are attached. The **indicator** or diffusion element may contain a known amt. of cpd. (esp. sulphamic acid) which reacts with any **NH3** already present (to ensure that only (I) - generated **NH3** is detected.) II Partic. the substrate element comprises absorbent paper impregnated with a buffered **urea** soln. then dried, and the diffusion element is a membrane of pore size 0.05-10 (esp. 0.1-10) microns, e.g. of PTFE. IITo provide a positive control, a known amt. of **urease** is placed on the diffusion element, away from the test **sample**. USE/ADVANTAGE - The method is used to detect helicobacter pyloric (a possible cause of gastritis and ulcers) in human gastric mucosal **biopsies**. In theis test components of the **sample** do not interfere with the **indicator** reaction, and the **sample** is incubated at **pH** optimal for (I) activity.
Dwg. 1/4
Dwg. 1/4

FS CPI EPI
FA AB; GI; DCN
MC CPI: B04-B02C3; B10-A13D; B11-C08E3; **B12-K04A**; D05-A02C; D05-H09
EPI: S03-E04E; **S03-E14H6**
ABEQ US 5314804 A UPAB: 19940705
Detecting **urease** in a biological **tissue** specimen comprises (A) positioning the specimen on 1 side of a diffusion element permeable to **ammonia**; (B) contacting the specimen with a **pH** optimised **urease** substrate comprising a soln. of **urea** and a buffer having a **pH** of 7.0-9.0; (c) permeating the obtd. **ammonia** through the diffusion element to contact an **indicator** element at the opposite side of and contiguous with the diffusion element; and (D) observing the reaction of **ammonia** with the **indicator** element. The **indicator** element comprises a matrix contg. a **pH indicator** having a pKa of 2.0-6.0.
Pref. the diffusion element is a membrane having a pore size of 0.05-10 microns. The soln. of **urea** and buffer is contained in a matrix to form the **urease** substrate.
USE/ADVANTAGE - Used for determining the presence of Helicopter pylori. The method is rapid and easy.
Dwg.1/4

L113 ANSWER 13 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN **1991-232336** [32] WPIX
DNN **N1991-177148** DNC **C1991-101006**
TI Measurement of **urea** or **urease** in biological fluids - by mixing with **pH indicator** and **urease** or **urea**.
DC B04 D16 J04 S03 S05
IN ORSONNEAU, J L
PA (HOSP-N) CENT HOSPIT REG UNI
CYC 1
PI FR 2654436 A 19910517 (199132)*
ADT FR 2654436 A FR 1989-14907 19891114
PRAI FR 1989-14907 19891114
IC **C12Q001-58**; **G01N021-79**; **G01N033-62**
AB FR 2654436 A UPAB: 19930928
**Urea** or **urease** is measured in liqs., partic. biological fluids, by the following methods: the fluid is mixed with a first reagent contg. a stable dye the colour of which varies with **pH** in the range 5.5-9, it is then mixed with a second reagent contg. **urea** or **urease** which ever one is not present in the test soln.. The optical density of the mixt. is then measured at the

same wavelength of visible light before and after hydrolysis due to the action of the **urease**. The difference is compared with the result obtained with standard solns. and so the concn. of **urea** or **urease** is calculated.

ADVANTAGE - This process is cheap and simple to carry out, may be effected on urine **samples** without interference from **ammonia** present, and it does not require pre-treatment of the **sample** soln..

0/0

FS CPI EPI
FA AB; DCN
MC CPI: B04-B02C3; B04-B04B; B06-A02; **B10-A13C**; B11-C07B2; **B12-K04A**; D05-A02C; D05-H09; J04-B01
EPI: S03-E04E; **S03-E14H**; S05-C09

L113 ANSWER 14 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN **1990-376291** [51] WPIX
DNC **C1990-163955**
TI Detection of **urease** in endoscopic **biopsies** - by colour change of **urea** soln. contg. **phenol red indicator.**
DC B04 D16 J04
IN ISERHARD, R
PA (ISER-I) ISERHARD R
CYC 1
PI BR 8902699 A 19901120 (199051)*
ADT BR 8902699 A BR 1989-2699 19890519
PRAI BR 1989-2699 19890519
IC **C12Q001-58**
AB BR 8902699 A UPAB: 19930928
The enzyme **urease** performed in endoscopic **biopsies** of gastro-duodenal mucous membrane by bacterial action, is detected by immersing the **biopsy** specimen in a gelatinous soln. contg. peptone 1.0 g/l., glucose 1.0, sodium chloride 5, monobasic K phosphate 2, **Phenol Red** 0.012, **urea** 20, Metronidazol 0.002, Gentamicine 0.24 and agar-agar 12 g/l., in dist. water, in presence of **urease**, **ammonia** and bicarbonate are liberated, raising the **pH** from 5.8 to over 6.0 and changing the colour of the gel from pale yellow to red. The anti-bacterial agents prevents contamination by bacteria from **biopsy** equipment.
FS CPI
FA AB
MC CPI: B02-G; B04-B02C3; B06-C; B07-D09; **B10-A13C**; **B11-C07B1**; **B12-K04A**; D05-H09; J04-B01

L113 ANSWER 15 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN **1990-178354** [23] WPIX
DNC **C1990-077456**
TI Enrichment and isolation of campylobacter pylori - using acidic medium to kill non-**urease** producing bacteria and plating on agar contg. selective antibiotics.
DC B04 D16 J04
IN GUERRANT, R L; **MARSHALL, B J**
PA (UYVI-N) UNIV VIRGINIA
CYC 1
PI US 4923801 A 19900508 (199023)*
ADT US 4923801 A US 1987-37938 19870413
PRAI US 1987-37938 19870413
IC **C12Q001-58**
AB US 4923801 A UPAB: 19930928
Enrichment and isolation of campylobacter pylon form a specimen contaminated with a plurality of non-**urease** and **urease** producing organisms comprises: (a) homogenizing a specimen contaminated

with organisms in water; (b) introducing the homogenate into an acidified (**ph**<2.5) soln. of **urea**, so that most of the non-**urease** producing and some of the **urease**-producing organisms are killed by the acid medium, those remaining being pretreated from acid attack by creating a protective ammonium layer by breaking down the **urea**; (c) plating the remaining **urease**-producing organisms onto a medium contg. antibiotics inhibitory to most of these organisms but not to C. pylon; and (d) detecting the presence of colonies of C.pylon.

USE/ADVANTAGE - C.pylon is a slow growing fastidious organisms and could not previously be easily isolated from biological specimens contg. contaminating bacteria. The new method of isolation utilizes the discovery that C pylon is able to survive in acid medium provided that **urea** is present, by prodn. of **urease** which breaks down the **urea** to **ammonia** which neutralises the acid and protects th organism. It is therefore possible to isolate C. pylon from leading contaminated specimens such as stool. Early detection and isolation of C. pylon would enable specific etiological diagnosis of this infection, and rapid determination of antibiotic sensitivities. @

0/0

FS CPI
FA AB; DCN
MC CPI: B04-B02B1; B11-C08E3; **B12-K04A4**; D05-A02C; D05-H06; J04-B01

L113 ANSWER 16 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN 1986-340935 [52] WPIX
CR 1986-340936 [52]
DNC C1986-147787
TI Treatment of gastrointestinal disorders - with daily dosages of bismuth e.g. in salt form.
DC B05 B06 P32
IN **MARSHALL, B J**
PA (MARS-I) MARSHALL B J; (PROC) PROCTER & GAMBLE CO
CYC 14
PI EP 206626 A 19861230 (198652)* EN 11p
R: AT BE CH DE FR GB IT LI LU NL SE
BE 904922 A 19861215 (198701)
DE 3619733 A 19870212 (198707)
DE 3619734 A 19870212 (198707)
JP 62048624 A 19870303 (198714)
EP 206626 B1 19920812 (199233) EN 6p A61K033-00
R: AT BE CH DE FR GB IT LI LU NL SE
DE 3686361 G 19920917 (199239) A61K033-00
JP 07094391 B2 19951011 (199545) 5p A61K031-29
PH 26891 A 19921103 (199635) A61K045-00
US 5601848 A 19970211 (199712) 6p A61K033-24
EP 206626 B2 20020522 (200241) EN A61K033-24
R: AT BE CH DE FR GB IT LI LU NL SE
ADT EP 206626 A EP 1986-304408 19860610; BE 904922 A BE 1986-904922 19860613; DE 3619733 A DE 1986-3619733 19860612; DE 3619734 A DE 1986-3619734 19860612; JP 62048624 A JP 1986-138038 19860613; EP 206626 B1 EP 1986-304408 19860610; DE 3686361 G DE 1986-3686361 19860610, EP 1986-304408 19860610; JP 07094391 B2 JP 1986-138038 19860613; PH 26891 A PH 1986-33888 19860713; US 5601848 A Cont of US 1985-744842 19850613, US 1987-70857 19870708; EP 206626 B2 EP 1986-304408 19860610
FDT DE 3686361 G Based on EP 206626; JP 07094391 B2 Based on JP 62048624
PRAI US 1985-744842 19850613; US 1987-70857 19870708
REP 3.Jnl.Ref; A3...8915; EP 75992; FR 5877; FR 6197; GB 1107655; No-SR.Pub; US 3577533; 8.Jnl.Ref
IC A61D000-00; A61K031-19; A61K031-29; A61K033-24; **C12Q001-58**; G01N033-50
ICM A61K031-29; A61K033-00; A61K033-24; A61K045-00
ICS A61D000-00; A61K031-19; A61K031-60; **C12Q001-58**; G01N033-50

AB EP 206626 A UPAB: 20020701
Bismuth is used for the mfr. of a medicament for treatment of gastrointestinal disorders in humans and animals, the treatment comprising administration of 50,5,000 mg/day of bismuth, for 3-21 days. Pref. the daily dose of bismuth is 500-1,500 mg. The bismuth is pref. in the form of a salt e.g. the aluminate, sub-carbonate, (sub)citrate, sub-galate, sub-nitrate, tartrate or sub-salicylate or tripotassium dicitrato bismuthate. The stated wt. quantities are of elemental bismuth, so the actual wt. of bismuth contg. cpd. will be greater. Pref. before treatment with the bismuth the subject is positively diagnosed for CLO infection. Diagnosis is then repeated during the administration and administration is terminated when diagnosis yields a negative result. compsns. for administering the bismuth are conventional.
ADVANTAGE - The method cures, or affords lower relapse rates of, gastritis and peptic ulcer disease. It does not render the patient hypochlorhydric.
0/0
Dwg.0/0
FS CPI GMPI
FA AB
MC CPI: B05-A02; B12-E08; B12-J01
ABEQ DE 3686361 G UPAB: 19930922
Bismuth is used for the mfr. of a medicament for treatment of gastrointestinal disorders in humans and animals, the treatment comprising administration of 50,5,000 mg/day of bismuth, for 3-21 days. Pref. the daily dose of bismuth is 500-1,500 mg. The bismuth is pref. in the form of a salt e.g. the aluminate, sub-carbonate, (sub)citrate, sub-galate, sub-nitrate, tartrate or sub-salicylate or tripotassium dicitrato bismuthate. The stated wt. quantities are of elemental bismuth, so the actual wt. of bismuth contg. cpd. will be greater. Pref. before treatment with the bismuth the subject is positively diagnosed for CLO infection. Diagnosis is then repeated during the administration and administration is terminated when diagnosis yields a negative result. compsns. for administering the bismuth are conventional.
ADVANTAGE - The method cures, or affords lower relapse rates of, gastritis and peptic ulcer disease. It does not render the patient hypochlorhydric.
ABEQ DE 3686362 G UPAB: 19930922
Bismuth is used for the mfr. of a medicament for treatment of gastrointestinal disorders in humans and animals, the treatment comprising administration of 50,5,000 mg/day of bismuth, for 3-21 days. Pref. the daily dose of bismuth is 500-1,500 mg. The bismuth is pref. in the form of a salt e.g. the aluminate, sub-carbonate, (sub)citrate, sub-galate, sub-nitrate, tartrate or sub-salicylate or tripotassium dicitrato bismuthate. The stated wt. quantities are of elemental bismuth, so the actual wt. of bismuth contg. cpd. will be greater. Pref. before treatment with the bismuth the subject is positively diagnosed for CLO infection. Diagnosis is then repeated during the administration and administration is terminated when diagnosis yields a negative result. compsns. for administering the bismuth are conventional.
ADVANTAGE - The method cures, or affords lower relapse rates of, gastritis and peptic ulcer disease. It does not render the patient hypochlorhydric.
ABEQ EP 206626 B UPAB: 19930922
The use of bismuth for the manufacture of a medicament for the treatment of a disorder of the upper gastrointestinal tract of a human or other animal subject in which the disorder is caused or mediated by Campylobacter pyloridis, and wherein is excluded the use of bismuth in the form of bismuth subsalicylate.
0/0
ABEQ EP 206627 B UPAB: 19930922
The use of bismuth subsalicylate for the manufacture of a medicament for the treatment of a disorder of the upper gatrointestinal tract of a human

or other animal subject in which the disorder is caused or mediated by Campylobacter pyloridis.
0/0

ABEQ US 5601848 A UPAB: 19970320
Treatment of a human or lower animal subject having an infectious gastrointestinal disorder caused or mediated by Campylobacter pyloridis comprises combating said Campylobacter pyloridis infection in said subject, comprising the step of orally administering to said subject from about 50 mg to about 5000 mg of bismuth, per day, for from 3 to 56 days, wherein said bismuth is selected from the group consisting of bismuth aluminate, bismuth subcarbonate, bismuth citrate, bismuth subgalate, bismuth subnitrate, bismuth tartrate, bismuth subsalicylate, and mixtures thereof.
Dwg.0/0

L113 ANSWER 17 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN 1986-327235 [50] WPIX
DNN N1986-244169 DNC C1986-141647
TI Compsn. for diagnosis of gastrointestinal disorders - e.g. mediated by Campylobacter pyloridis infection, comprises **urea**, bactericide, **pH indicator** and water.
DC B04 D16 S03
IN **MARSHALL, B J**
PA (MARS-I) MARSHALL B J
CYC 20
PI EP 204438 A 19861210 (198650)* EN 25p
R: AT BE CH DE FR GB IT LI LU NL SE
AU 8657398 A 19861120 (198702)
NO 8601966 A 19861215 (198705)
DK 8602283 A 19861118 (198707)
BR 8602243 A 19870113 (198708)
JP 62026000 A 19870203 (198710)
ZA 8603605 A 19871116 (198808)
US 4748113 A 19880531 (198824)
CA 1274757 A 19901002 (199045)
EP 204438 B 19910306 (199110)
R: AT BE CH DE FR GB IT LI LU NL SE
DE 3677820 G 19910411 (199116)
JP 06095960 B2 19941130 (199501) 6p C12Q001-58 <--
KR 9406322 B1 19940716 (199617)# A61K031-17
DK 173710 B 20010709 (200147) C12Q001-58 <--
ADT EP 204438 A EP 1986-303493 19860508; JP 62026000 A JP 1986-112427 19860516; ZA 8603605 A ZA 1986-3605 19860515; US 4748113 A US 1985-744840 19850613; JP 06095960 B2 JP 1986-112427 19860516; KR 9406322 B1 KR 1986-7444 19860905; DK 173710 B DK 1986-2283 19860516
FDT JP 06095960 B2 Based on JP 62026000; DK 173710 B Previous Publ. DK 8602283
PRAI US 1985-744840 19850613; KR 1986-7444 19860905
REP 2.Jnl.Ref; A3...8721; EP 18825; FR 2442268; GB 1112251; JP 58077663; No-SR.Pub; US 3145086; US 4101382; US 4282316; JP 58077172
IC C12M001-34; **C12Q001-58**; **G01N033-00**
ICM A61K031-17; **C12Q001-58**
ICS A61B005-00; C12M001-34; **G01N033-00**
ICA **G01N033-62**
AB EP 204438 A UPAB: 19930922
Compsn. for detection of preformed **urease** comprises **urea**, a bactericide, sufficient **pH indicator** undergoing a colour change on increase of **pH**, and water.The compsn. has acid **pH** of at least 5.0 and **pH** is at least 1 **pH** unit lower than the pKa of the **indicator**.
Device for use as above comprises a container of vol. 40-1000 cu.mm. with an aperture area of 20-200 sq.mm, with a movable cover to open and close the opening, and contg. 0.04-2.0 pref. 0.2-0.4 ml of the above compsn..

USE/ADVANTAGE - Useful in diagnosis of gastrointestinal diseases mediated by e.g. Campylobacter pyloridis, which produces a high activity **urease**. Compsn. gives rapid, inexpensive and accurate diagnosis, of e.g. chronic or atrophic gastritis, gastroenteritis, dyspepsia, oesophageal reflux disease, gastric and duodenal ulcers, etc.. The bactericide ensures that only preformed **urease** is analysed.
3/3

FS CPI EPI
FA AB
MC CPI: B04-B02C3; B06-C; **B10-A13C; B11-C07B1; B12-K04A;** B12-K04D; D05-A02C; D05-H09
EPI: **S03-E14H9**

ABEQ EP 204438 B UPAB: 19930922
A composition for the diagnosis of gastrointestinal disorder in a human or lower animal subject by detection of **urease** in gastric material of the subject characterised in that it comprises (a) **urea**; (b) a bactericide which substantially inhibits growth of **urease** producing organisms; (c) a **pH indicator** which undergoes a colour change upon an increase of **pH**, at an effective concentration; and (d) water; wherein said composition has an acid **pH** of at least 5.0 and the **pH** of said composition is at least about one **pH** unit lower than the pKa of said **indicator**.

ABEQ US 4748113 A UPAB: 19930922
Compsn. for diagnosis of gastrointestinal disorders, by detecting **urease** in gastric material of the patient, comprises (a) 10-40 g/l **urea**, (b) 1-5 g/l bactericide to inhibit growth of **urease** -producing organisms, (c) **indicator** having pKa 6.5-8.5, and (d) water. The compsn. has **pH** 5.0-6.5 and the **pH** is at least 1 unit below the pKa of the **indicator**.

The **indicator** is e.g. **phenol red**. The compsn. opt. includes a buffer and a gelling agent, e.g. non-nutritive agar.

ADVANTAGE - Compsn. allows rapid, inexpensive and accurate diagnosis of disorders of the upper gastrointestinal tract.

L113 ANSWER 18 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN **1986-091422** [14] WPIX
DNN **N1986-066659** DNC **C1986-039132**
TI Colorimetric determn. of **ammonia** concn. - formed by **urease** treatment of **urea**, using phenol deriv. and oxidising agent in presence of imidazole or its deriv..
DC B04 D16 J04 S03
PA (WAKP) WAKO PURE CHEM IND LTD
CYC 1
PI JP 61038463 A 19860224 (198614)* 11p
PRAI JP 1984-160143 19840730
IC **G01N033-50**
AB JP 61038463 A UPAB: 19930922
The process involves colorimetry of **ammonia** using phenol system cpd. and oxidising agent. Colorimetry is carried out in presence of imidazole and/or an imidazole deriv.

Imidazole deriv. is e.g. 1-methylimidazole, 1-ethylimidazole, 1-phenylimidazole, 1-benzylimidazole, 2-methylimidazole, 2-ethylimidazole, 2-phenylimidazole, 1,2-dimethylimidazole, etc. The concn. of imidazole and/or imidazole deriv. in the final coloured liq. is more than 1 m mol./l., pref. 1-100 m mol/l. Phenol cpd. used as colouring component in the method is e.g. phenol, salicylic acid, m-hydroxybenzoic acid, p-hydroxybenzoic acid, sulphosalicylic acid, O-, m- or p-cresol, o-methoxyphenol, etc. N,N-disubstd. aniline cpd. such as N,N-dimethylaniline, N,N-dimethyl-m-toluidine, etc. may be used as colouring component in place of phenol system cpd. The concn. of phenol system cpd. of N,N-disubstd. aniline cpd. in the final coloured liq. is

more than 10 m mol./l., pref. 50-500 m mol/l. Oxidising agent used is e.g. hypochlorite, dichloroisocyanurate, chloramine T, etc., which is used in a concn. of effective chlorine of more than 0.01%, pref. 0.03-0.3%, in the final coloured liq.

USE/ADVANTAGE - For determn. of **ammonia** formed by treating **urea** with **urease**. Imidazole or imidazole deriv. used in the method is non-toxic, not harmful and stable to light in contrast with sodium nitroprusside previously used. Consequently, prepn. of **sample** liq. is easily carried out and the stability of imidazole or its deriv. in a liq. of **urease** used for the determn. of **urea** in blood serum is very high. Also as the colouring sensitivity of the colorimetry in the presence of imidazole or its deriv. is about 1/20 times that in the previous case of using sodium nitroprusside, the determn. of blood serum **urea** with **urease** is carried out at the absorption wavelength and the colorimetry is not affected by coloured substances in blood serum, such as haemoglobin, etc.

0/0

FS CPI EPI
FA AB
MC CPI: B04-B04D4; B05-C01; B07-D09; **B10-A13C**; B10-C03; B10-E02; B11-C08; **B12-K04**; D05-H08; J04-B01B
EPI: **S03-E14H**

L113 ANSWER 19 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN **1983-59481K** [25] WPIX
DNN **N1983-107229** DNC **C1983-057712**
TI **Urea** analysis by enzyme hydrolysis of **urea** in **sample** - converting resulting ammonium carbonate into **ammonia** and measuring amt. of **ammonia** by **indicator** discolouration.
DC B04 D16
PA (KYOT-N) KYOTO DAIICHI KAGAKU KK
CYC 1
PI JP 58077663 A 19830511 (198325)* 8p
PRAI JP 1981-177660 19811102
IC **C12Q001-58; G01N033-62**
AB JP 58077663 A UPAB: 19930925
Method comprises (a) hydrolysing **urea** in a **sample** by an enzyme system exhibiting **urease** activity in a **sample** hole which can be kept air-tight, (b) converting resulting ammonium carbonate into **ammonia** gas under alkaline condition, (c) leading the gas via a gas-permeable membrane into an **indicator** layer, and (d) determining the concn. of **urea** based on discoloration of the **indicator** corresp. to change in **pH** by **ammonia** gas.

**Urea** in biological fluids such as blood, blood serum, blood plasma, saliva, etc. can be rapidly, accurately and precisely determined regardless of kind of **sample** liq.

FS CPI
FA AB
MC CPI: B04-B04B; B04-B04D; B04-B04G; **B10-A13C**; **B11-C07B**; **B12-K04**; D05-A02

L113 ANSWER 20 OF 20 WPIX (C) 2003 THOMSON DERWENT
AN **1979-86085B** [48] WPIX
TI Diagnostic agent for **urea** determination - comprising a **urease** reaction layer and an **ammonia indicator** layer on a carrier acting as hand grip.
DC B04 S03 S05
IN LANGE, H R; ROTHE, A; SELLE, A K
PA (BOEF) BOEHRINGER MANNHEIM GMBH
CYC 18

PI DE 2821469 A 19791122 (197948)*
EP 5519 A 19791128 (197948) DE
R: AT BE CH DE FR GB IT LU NL SE
BR 7903035 A 19791204 (197951)
DK 7901995 A 19791210 (198002)
JP 54151096 A 19791127 (198002)
FI 7901533 A 19800131 (198009)
ZA 7902362 A 19800415 (198030)
US 4223089 A 19800916 (198040)
DD 143662 A 19800903 (198046)
CA 1113356 A 19811201 (198201)
EP 5519 B 19830413 (198316) DE
R: AT BE CH DE FR GB IT LU NL SE
DE 2965181 G 19830519 (198321)
JP 62043500 B 19870914 (198740)
PRAI DE 1978-2821469 19780517
REP 2.Jnl.Ref; DE 1240306; DE 1245619; DE 2118455; DE 2249647; DE 2626367; DE 2748857; US 2632761
IC C07D213-20; C07D215-00; **C12Q001-58**; **G01N021-06**; **G01N031-14**; **G01N033-16**
AB DE 2821469 A UPAB: 19930901
New diagnostic agents for the determination of **urea** consist of a hand grip affixed to which is an **indicator** layer for gaseous **ammonia**, and a reaction layer contg. a **urease** and an alkaline buffer. The **indicator** layer is firmly bound to the hand grip, while the reaction layer is held above it at a distance of 10-200 mu maintained by means of a spacer, the spacer and the reaction layer being readily separable from the **indicator** layer.
Used for determination of **urea** in body fluids in the diagnosis and monitoring of kidney disorders. The agent is simple to use without additional reaction chambers, and permits determination to be carried out on small specimens of whole blood, as well as serum or plasma. Reaction time is >=10 mins. at room temp. Visual evaluation gives semi-quantitative results, while re-emission photometry gives quantitative determination of **urea**.
FS CPI EPI
FA AB
MC CPI: B04-B04D; B04-C02; B04-C03; B07-D04; **B10-A13C**; **B11-C07B**; **B12-K04**

=> d his

(FILE 'HOME' ENTERED AT 09:08:06 ON 30 JUN 2003)
SET COST OFF

FILE 'REGISTRY' ENTERED AT 09:08:22 ON 30 JUN 2003
E UREASE/CN
L1 1 S E3
L2 558 S UREASE
L3 557 S L2 NOT L1
L4 1 S UREA/CN
L5 1 S AMMONIA/CN
L6 1 S PHENOL RED/CN
L7 23 S 143-74-8/CRN
L8 7 S L7 NOT (PMS OR MXS)/CI
L9 5 S L8 NOT (C6-C6/ES OR CYCLODEXTRIN)
L10 1 S AGAR/CN

FILE 'HCAPLUS' ENTERED AT 09:11:22 ON 30 JUN 2003
L11 6909 S L1
L12 150 S L3
L13 10252 S UREASE

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L14       10655 S L11-L13
L15       64068 S L4
L16      189239 S UREA
L17      115046 S L5
L18      333095 S AMMONIA OR NH3
L19        4892 S L14 AND L15,L16
L20        1587 S L19 AND L17,L18
L21        1287 S L6 OR L9
L22        2884 S PHENOL RED
L23         674 S PHENOLSULFONEPHTHALEIN OR PHENOLSULPHONEPHTHALEIN OR PHENOL()
L24         239 S PHENOLSULFONPHTHALEIN OR PHENOLSULPHONPHTHALEIN OR PHENOL()(S
L25          17 S L20 AND L21-L24
L26        5068 S L10
L27       47051 S AGAR
L28          20 S L20 AND L26,L27
L29           2 S L25 AND L28
L30          33 S L25,L28 NOT L29
L31          20 S L30 AND L11
L32          20 S L31 AND L11-L31
                SEL DN AN 6-9 12-15 20
L33          11 S L32 NOT E1-E27
L34          13 S L30 NOT L31
                SEL DN AN 1 5 9
L35           3 S L34 AND E28-E36
L36          16 S L29,L33,L35
                E MCMICHAEL D/AU
L37           5 S E6
                E MC MICHAEL D/AU
                E PETERSON K/AU
L38         145 S E3-E17
                E PETERSON KRIS/AU
L39           6 S E3,E11
                E MARSHALL B/AU
L40          73 S E3,E12
L41          14 S E25-E27
                E MENDIS A/AU
L42          23 S E3,E4,E6,E7
                E CHAIRMAN S/AU
L43           1 S E4
                E KIMBER/PA,CS
L44        1950 S E4-E79
L45           4 S E93-E100
L46           8 S L14 AND L37-L45
L47          20 S L36,L46 AND L11-L46
L48          10 S L33 NOT MERCURY/TI
L49          19 S L29,L35,L46,L48 AND L11-L48
L50        1122 S L1 (L) (ANST OR ANT OR DGN)/RL
L51          26 S L50 AND L21-L24
                E COLOR/CT
                E E58+ALL
                E E2+ALL
L52         753 S E4,E3+NT
L53        2940 S E8+NT
L54       15989 S E2+NT
                E E8+ALL
L55         803 S E6
L56         754 S E13+NT
L57        9551 S E12+NT
L58          44 S L50 AND L52-L57
L59          58 S L51,L58
L60          42 S L59 AND L15,L16
L61          10 S L59 AND L17,L18
L62           9 S L60 AND L61
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L63           9 S L62 AND L11-L62
L64           1 S L61 NOT L63
L65          24 S L49,L63
L66          32 S L60 NOT L65
                SEL DN AN 1 9 11 14 17 19 20 21 31 32
L67          10 S E1-E30
L68          34 S L65,L67 AND L11-L67
L69          34 S L68 AND (UREASE OR UREA OR AMMONI? O NH3 OR NH4 OR BUFFER? OR

     FILE 'HCAPLUS' ENTERED AT 09:54:14 ON 30 JUN 2003
                SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 09:54:32 ON 30 JUN 2003
L70           6 S E31-E36
L71           6 S L70 AND L1-L10

     FILE 'HCAPLUS' ENTERED AT 09:55:45 ON 30 JUN 2003
L72           1 S US20030082661/PN
L73           1 S L72 AND L69

     FILE 'WPIX' ENTERED AT 09:56:11 ON 30 JUN 2003
L74           0 S US20030082661/PN
L75        1083 S L13/BIX
                E UREASE/DCN
L76         321 S L75 AND G01N/IC,ICM,ICS,ICA,ICI
L77         242 S L75 AND G01N033/IC,ICM,ICS,ICA,ICI
L78          30 S L75 AND G01N033-48/IC,ICM,ICS,ICA,ICI
L79          44 S L75 AND G01N033-4?/IC,ICM,ICS,ICA,ICI
L80          44 S L78,L79
                SEL DN AN 2 24
L81           2 S L80 AND E1-E6
L82         226 S C12Q001-58/IC,ICM,ICS,ICA,ICI
L83        1200 S L75,L82
L84         158 S L83 AND Q505/M0,M1,M2,M3,M4,M5,M6
L85          28 S C12Q001-04/IC,ICM,ICS,ICA,ICI AND L83
L86         178 S L84,L85
L87          72 S L83 AND (B11-C07B OR C11-C07B OR B11-C07B1 OR C11-C07B1)/MC
L88         203 S L86,L87
L89          18 S L83 AND (L22/BIX OR L23/BIX OR L24/BIX)
                E PHENOL RED/DCN
                E E3+ALL
L90          13 S L83 AND E2
L91         207 S L88-L90
L92          93 S L91 AND S03-E14H?/MC
L93         162 S L91 AND (B12-K04 OR C12-K04 OR B12-K04A OR C12-K04A OR B12-K0
L94           1 S L91 AND (B12-J01 OR C12-J01 OR B14-E10 OR C14-E10 OR B12-J OR
L95         165 S P831/M0,M1,M2,M3,M4,M5,M6 AND L86
L96         112 S L91 AND UREA/BIX
                E UREA/DCN
                E E3+ALL
L97          85 S L91 AND (E2 OR 0123/DRN)
L98          72 S L91 AND (B10-A13C OR C10-A13C)/MC
L99           2 S L91 AND (B10-A13 OR C10-A13)/MC
L100        122 S L96-L99
L101         50 S L100 AND (AMMONIA OR NH3)/BIX
                E AMMONIA/DCN
                E E3+ALL
L102         13 S L100 AND (E2 OR 1713)/DRN
L103         50 S L101,L102
L104         50 S L103 AND L91-L94
                SEL DN AN 1 6 7 9 12 15 16 18 22 24 25 32 38 48
L105         14 S L104 AND E1-E35
L106         16 S L81,L105
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                E MCMICHAEL D/AU
L107          1 S E5
                E MC MICHAEL D/AU
                E PETERSON K/AU
L108        180 S E3-E22
                E MARSHALL B/AU
L109         41 S E3,E11
                E MENDIS A/AU
                E CHAIRMAN S/AU
L110          8 S L107-L109 AND L83
L111         20 S L106,L110 AND L75-L110
L112         18 S L111 AND (INDICAT? OR PH OR BIOPS? OR SAMPL? OR TISSU?)/BIX
L113         20 S L111,L112

     FILE 'WPIX' ENTERED AT 10:27:58 ON 30 JUN 2003
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US 099776670AP1

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Indexing Officer: ICHARLES - IRENE CHARLES
Team: OIPEBackFileIndexing
Dossier: 09977667

Legal Date: 08-26-2003

| No. | Doccode | Number of pages |
|---|---|---|
| 1 | SRNT | 14 |

Total number of pages: 14

Remarks:

Order of re-scan issued on .....